STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING FORM 3 AMENDED REPORT								
APPLI		1. WELL NAME and	NBU 921-35H1BS					
2. TYPE OF WORK DRILL NEW WELL (REENTER P&A WELL (DEEPEN WELL ()						3. FIELD OR WILD	CAT NATURAL BUTTES	
4. TYPE OF WELL Gas We	ell Coall	bed Methane Well: NO				5. UNIT or COMMU	INITIZATION AGRE	EMENT NAME
6. NAME OF OPERATOR KERF	R-MCGEE OIL &	GAS ONSHORE, L.P.				7. OPERATOR PHO	NE 720 929-6007	
8. ADDRESS OF OPERATOR		Denver, CO, 80217				9. OPERATOR E-M.		darko.com
10. MINERAL LEASE NUMBER	RSHIP	_		12. SURFACE OWN				
(FEDERAL, INDIAN, OR STATE) ML 22582	DIAN STATE (STATE FEE FEE INDIAN STATE FEE						
13. NAME OF SURFACE OWNER (if box 12	= 'fee')					14. SURFACE OWN	IER PHONE (if box	12 = 'fee')
15. ADDRESS OF SURFACE OWNER (if box	12 = 'fee')					16. SURFACE OWN	IER E-MAIL (if box	12 = 'fee')
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN') 18. INTEND TO COMMING MULTIPLE FORMATIONS YES (Submit Commi					ROM NO	19. SLANT VERTICAL DI	RECTIONAL 📵 H	ORIZONTAL 🗍
20. LOCATION OF WELL FO		DOTAGES	QTR-QTR	9	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	RFACE 2143 FNL 486 FEL		SENE		35	9.0 S	21.0 E	S
Top of Uppermost Producing Zone	1411 FNL 494 FEL				35	9.0 S	21.0 E	S
t Total Depth 1411 FNL 494 FEL			SENE		35	9.0 S	21.0 E	S
21. COUNTY UINTAH	EAREST LEASE LIN 494	IE (Fe	et)	23. NUMBER OF A	CRES IN DRILLING	UNIT		
	EAREST WELL IN S or Completed) 675	AME	POOL	26. PROPOSED DEPTH MD: 9783 TVD: 9685				
27. ELEVATION - GROUND LEVEL		28. BOND NUMBER		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICA				
5098			22013542					
		A	TTACHMENTS					
VERIFY THE FOLLOWING	ARE ATTACH	HED IN ACCORDAN	CE WITH THE U	TAH(OIL AND (GAS CONSERVAT	ION GENERAL R	ULES
WELL PLAT OR MAP PREPARED BY	R COM	COMPLETE DRILLING PLAN						
AFFIDAVIT OF STATUS OF SURFACE	ACE) FORI	FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER						
DIRECTIONAL SURVEY PLAN (IF DID DRILLED)	₩ ТОР	TOPOGRAPHICAL MAP						
NAME Danielle Piernot	1	FITLE Regulatory Analys	st		PHONE 72	20 929-6156		
SIGNATURE		DATE 11/23/2010			EMAIL gn	bregulatory@anadark	o.com	
API NUMBER ASSIGNED 43047513650000	,	APPROVAL			Bi	ocyill		
					Perr	mit Manager		

API Well No: 43047513650000 Received: 11/23/2010

	Propo	nd Cement		_	
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)	
Prod	7.875	4.5	0	9783	
Pipe	Grade	Length	Weight		
	Grade I-80 Buttress	9783	11.6		Г

API Well No: 43047513650000 Received: 11/23/2010

	Prop				
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)	
Surf	11	8.625	0	2610	
Pipe	Grade	Length	Weight		
	Grade J-55 LT&C	2610	28.0		

Drilling Program 1 of 16

NBU 921-35H1BS

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 921-35H1BS

Surface: 2143 FNL / 486 FEL SENE BHL: 1411 FNL / 494 FEL SENE

Section 35 T9S R21E

Unitah County, Utah Mineral Lease: ST UT ML 22582

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. & 2. Estimated Tops of Important Geologic Markers: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1458	
Birds Nest	1785	Water
Mahogany	2160	Water
Wasatch	4748	Gas
Mesaverde	7448	Gas
MVU2	8361	Gas
MVL1	8946	Gas
TVD	9685	
TD	9783	

3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program

6. <u>Evaluation Program</u>:

Please refer to the attached Drilling Program

NBU 921-35H1BS

Drilling Program 2 of 16

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 9,685' TVD, approximately equals 5,933 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,803 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. <u>Variances:</u>

Please refer to the attached Drilling Program. Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- · Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

NBU 921-35H1BS Drilling Program
3 of 16

The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie

NBU 921-35H1BS Drilling Program

line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter 4 of 16 productive formations.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

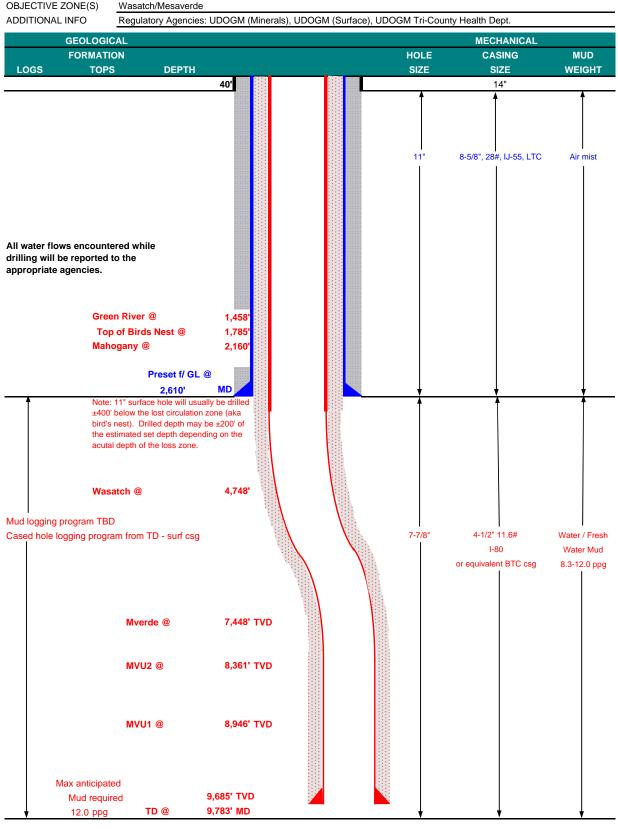
10. <u>Other Information:</u>

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP DATE November 17, 2010 NBU 921-35H1BS WELL NAME 9,685' TVD 9,783' MD COUNTY Uintah FINISHED ELEVATION FIELD Natural Buttes STATE Utah 5,098' SURFACE LOCATION SENE 2143 FNL 486 FEL Sec 35 T 9S R 21E Latitude: 39.993902 Longitude: -109.510523 NAD 27 BTM HOLE LOCATION SENE 1411 FNL 494 FEL Sec 35 T 9S R 21E Latitude: 39.995911 -109.510555 NAD 27 Longitude: OBJECTIVE ZONE(S) Wasatch/Mesaverde





KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

									DESIGN FACT	ORS
	SIZE	INTI	ERVAL	_	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"	C	-40'							
								3,390	1,880	348,000
SURFACE	8-5/8"	0	to	2,610	28.00	IJ-55	LTC	0.86	1.54	4.71
								7,780	6,350	278,000
PRODUCTION	4-1/2"	0	to	9,783	11.60	I-80	BTC	1.99	1.05	2.81

^{*}Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.06

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.0 ppg) 0.22 psi/ft = gradient for partially evac wellbore (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 3,803 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.0 ppg) 0.61 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MABHP 5,933 psi

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
		+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water to sur	face, optio	n 2 will be ເ	ıtilized	
Option 2 LEAD	2,110'	65/35 Poz + 6% Gel + 10 pps gilsonite	190	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOW				
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION LEAD	4,243'	Premium Lite II +0.25 pps	310	10%	11.00	3.38
		celloflake + 5 pps gilsonite + 10% gel				
		+ 0.5% extender				
TAIL	5,540'	50/50 Poz/G + 10% salt + 2% gel	1,070	10%	14.30	1.31
		+ 0.1% R-3				

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION

Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

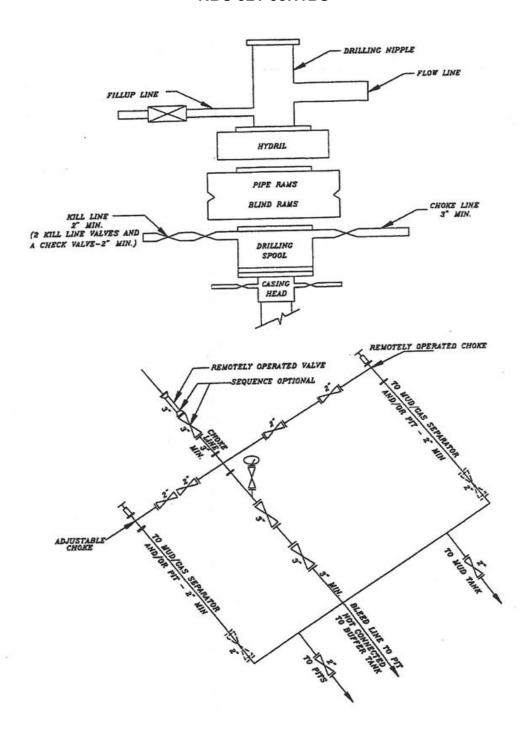
Surveys will be taken at 1,000' minimum intervals.
Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:		DATE:	
	John Huycke / Emile Goodwin		
DRILLING SUPERINTENDENT:		DATE:	
	John Merkel / Lovel Young		

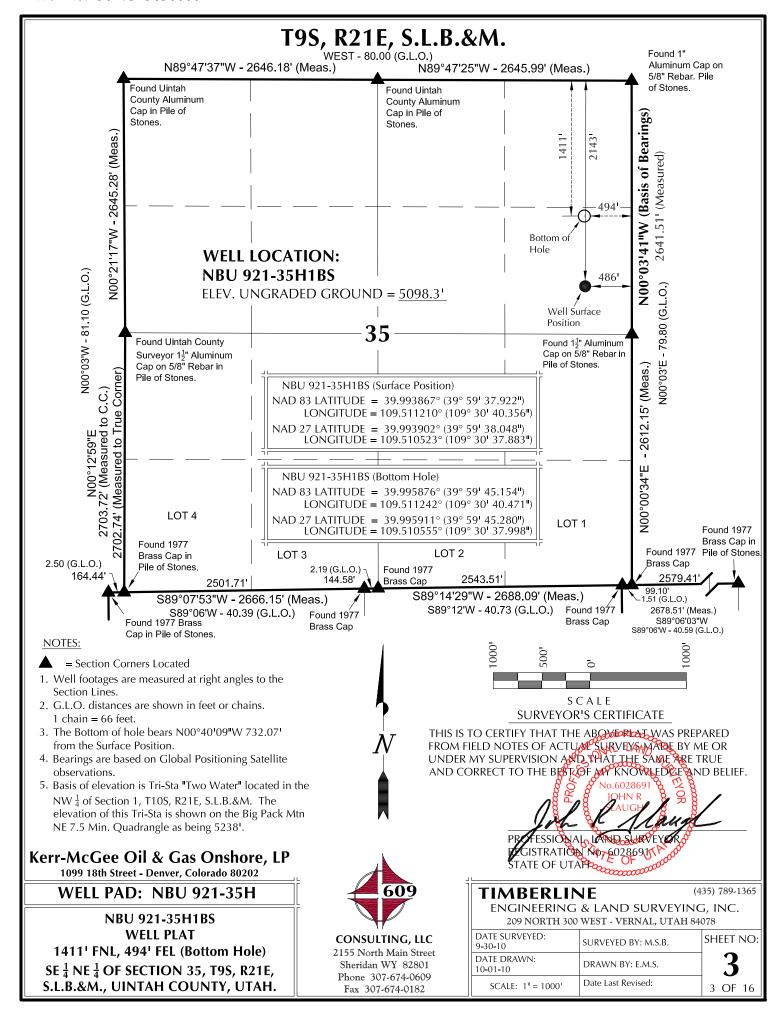
¹⁾ Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

EXHIBIT A NBU 921-35H1BS

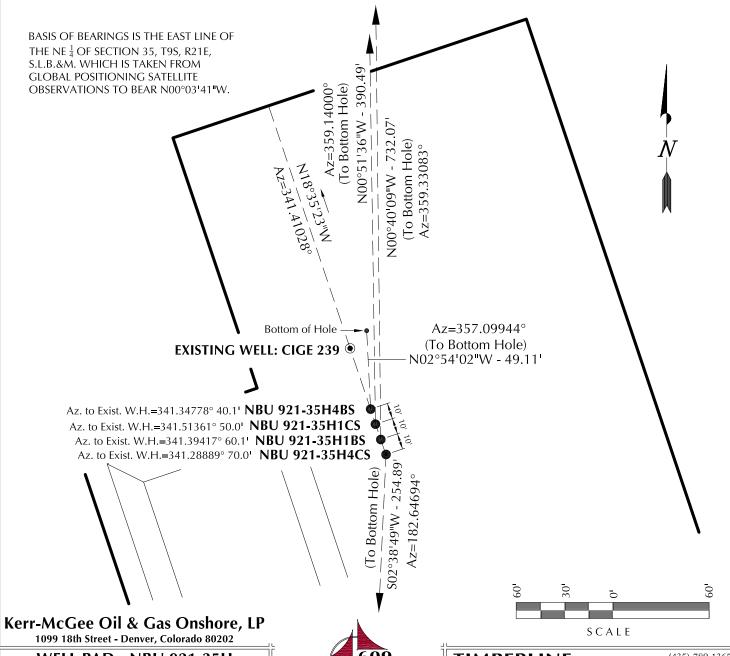


SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



NBU 39°55 921-35H4BS 39.99 NBU 39°59 921-35H1CS 39.99 NBU 39°59 921-35H1BS 39.99 NBU 39°59	993919° 59'38.017" 993893° 59'37.922"	083 LONGITUDE 109°30'40.437" 109.511233° 109°30'40.399" 109.511222° 109°30'40.356"	NAI LATITUDE 39°59'38.235" 39.993954° 39°59'38.143" 39.993929° 39°59'38.048"	109°30'37.965" 109.510546° 109°30'37.926" 109.510535°	FOOTAGES 2124' FNL 493' FEL 2133' FNL 490' FEL	NAE LATITUDE 39°59'38.594" 39.994054° 39°59'41.874" 39.994965°	LONGITUDE 109°30'40.470" 109.511242° 109°30'40.477" 109.511243°	39°59'42.000"		FOOTAGES 2075' FNL 495' FEL 1743' FNL 495' FEL
NBU 39°55 921-35H4BS 39.99 NBU 39°55 921-35H1CS 39.99 NBU 39°55 921-35H1BS 39.99 NBU 39°55	59'38.109" 993919° 59'38.017" 993893° 59'37.922"	109°30'40.437" 109.511233° 109°30'40.399" 109.511222°	39°59'38.235" 39.993954° 39°59'38.143" 39.993929°	109°30'37.965" 109.510546° 109°30'37.926" 109.510535°	2124' FNL 493' FEL 2133' FNL 490' FEL	39°59'38.594" 39.994054° 39°59'41.874"	109°30'40.470" 109.511242° 109°30'40.477"	39°59'38.720" 39.994089° 39°59'42.000"	109°30'37.997" 109.510555° 109°30'38.004"	495' FEL 1743' FNL
921-35H4BS 39.99 NBU 39°59 921-35H1CS 39.99 NBU 39°59 921-35H1BS 39.99 NBU 39°59	993919° 59'38.017" 993893° 59'37.922"	109.511233° 109°30'40.399" 109.511222°	39.993954° 39°59'38.143" 39.993929°	109.510546° 109°30'37.926" 109.510535°	493' FEL 2133' FNL 490' FEL	39.994054° 39°59'41.874"	109.511242° 109°30'40.477"	39.994089° 39°59'42.000"	109.510555° 109°30'38.004"	495' FEL 1743' FNL
NBU 39°59 921-35H1CS 39.99 NBU 39°59 921-35H1BS 39.99 NBU 39°59	59'38.01 <i>7</i> " 993893° 59'37.922"	109°30'40.399" 109.511222°	39°59'38.143" 39.993929°	109°30'37.926" 109.510535°	2133' FNL 490' FEL	39°59'41.874"	109°30'40.477"	39°59'42.000"	109°30'38.004"	1743' FNL
921-35H1CS 39.99 NBU 39°59 921-35H1BS 39.99 NBU 39°59	993893° 59'37.922"	109.511222°	39.993929°	109.510535°	490' FEL					
NBU 39°59 921-35H1BS 39.99 NBU 39°59	59'37.922"					39.994965°	109.511243°	39.995000°	109.510557°	4951 EEL
921-35H1BS 39.99 NBU 39°59		109°30'40.356"	39°59'38.048"	100020127 0021					.05.5.0557	733 ILL
NBU 39°59				109°30'37.883"	2143' FNL	39°59'45.154"	109°30'40.471"	39°59'45.280"	109°30'37.998"	1411' FNL
	993867°	109.511210°	39.993902°	109.510523°	486' FEL	39.995876°	109.511242°	39.995911°	109.510555°	494¹ FEL
921-35H4CS 39.99	59'37.829"	109°30'40.313"	39°59'37.956"	109°30'37.841"	2152' FNL	39°59'35.314"	109°30'40.463"	39°59'35.440"	109°30'37.990"	2407' FNL
	993842°	109.511198°	39.993877°	109.510511°	483' FEL	39.993143°	109.511240°	39.993178°	109.510553°	495' FEL
39°59	59'38.485"	109°30'40.602"	39°59'38.611"	109°30'38.130"	2086' FNL					
CIGE 239 39.99	994024°	109.511278°	39.994059°	109.510592°	505' FEL					
	RELATIVE COORDINATES - From Surface Position to Bottom Hole									

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 921-35H4BS	49.0'	-2.5'	NBU 921-35H1CS	390.4'	-5.9'	NBU 921-35H1BS	732.0'	-8.5'	NBU 921-35H4CS	-254.6	-11.8'



WELL PAD - NBU 921-35H

WELL PAD INTERFERENCE PLAT
WELLS - NBU 921-35H4BS, NBU 921-35H1CS,
NBU 921-35H1BS & NBU 921-35H4CS
LOCATED IN SECTION 35, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH.



CONSULTING, LLC

2155 North Main Street Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

TIMBERLINE

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 9-30-10	SURVEYED BY: M.S.B.	SHEET NO
DATE DRAWN: 10-01-10	DRAWN BY: E.M.S.	5
SCALE: 1" = 60'	Date Last Revised:	5 OF 16

EXISTING GRADE @ CENTER OF WELL PAD = 5098.3¹ FINISHED GRADE ELEVATION = 5097.7¹ CUT SLOPES = 1.5:1 FILL SLOPES = 1.5:1 TOTAL WELL PAD AREA = 3.57 ACRES TOTAL DAMAGE AREA = 6.28 ACRES SHRINKAGE FACTOR = 1.10 SWELL FACTOR = 1.00

Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-35H

WELL PAD - LOCATION LAYOUT NBU 921-35H4BS, NBU 921-35H1CS, NBU 921-35H1BS & NBU 921-35H4CS LOCATED IN SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC

2155 North Main Street

Sheridan, WY 82801

Phone 307-674-0609 Fax 307-674-0182

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 10,957 C.Y. TOTAL FILL FOR WELL PAD = 4,429 C.Y. TOPSOIL @ 6" DEPTH = 2,087 C.Y. EXCESS MATERIAL = 6,528 C.Y.

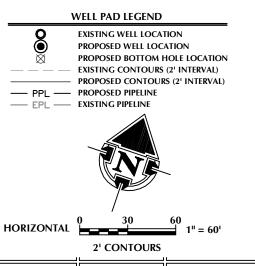
RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT +/- 11,020 CY RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 42,290 BARRELS

TIMBERLINE (435) 789-13 ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365 Sc

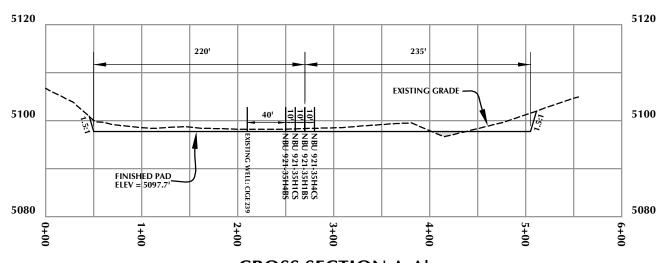
REVISED:



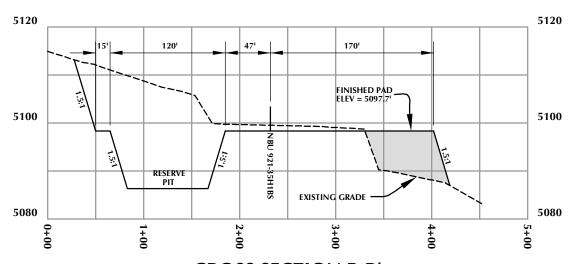
1"=601 Date: 10/15/10 SHEET NO:

6 OF 16

<:\ANADARKO\2010_53_NBU_FOCUS_SEC_921-35\DWG\NBU 921-35H\NBU_921-35H_PAD_ALT_20101004.dwg, 10/14</p>



CROSS SECTION A-A'



Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-35H

WELL PAD - CROSS SECTIONS NBU 921-35H4BS, NBU 921-35H1CS, NBU 921-35H1BS & NBU 921-35H4CS LOCATED IN SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH CROSS SECTION B-B'



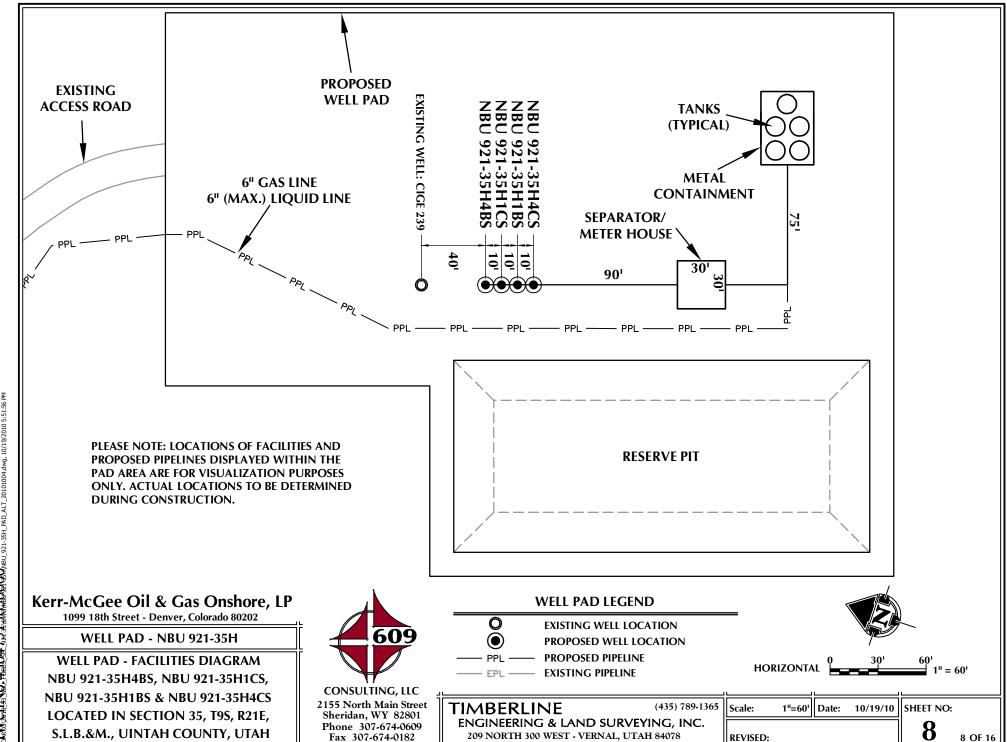
CONSULTING, LLC 2155 North Main Street Sheridan, WY 82801 Phone 307-674-0609 Fax 307-674-0182 HORIZONTAL 0 10 1" = 100'

VERTICAL 0 10 20 1" = 20'

7 OF 16

TIMBERLINE (435) 789-13
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365 | Scale: 1"=100" | Date: 10/19/10 | SHEET NO: 7



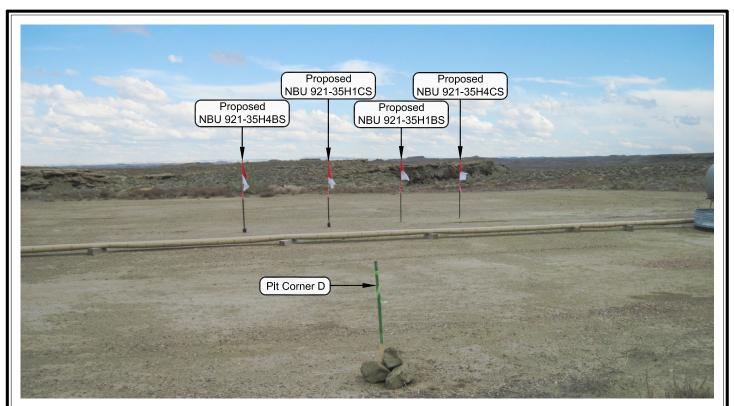


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: SOUTHEASTERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: SOUTHEASTERLY

Kerr-McGee Oil & Gas Onshore, LP

WELL PAD - NBU 921-35H

LOCATION PHOTOS NBU 921-35H4BS, NBU 921-35H1CS, NBU 921-35H1BS & NBU 921-35H4CS LOCATED IN SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.



CONSULTING, LLC 2155 North Main Street Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

TIMBERLINE

Date Last Revised:

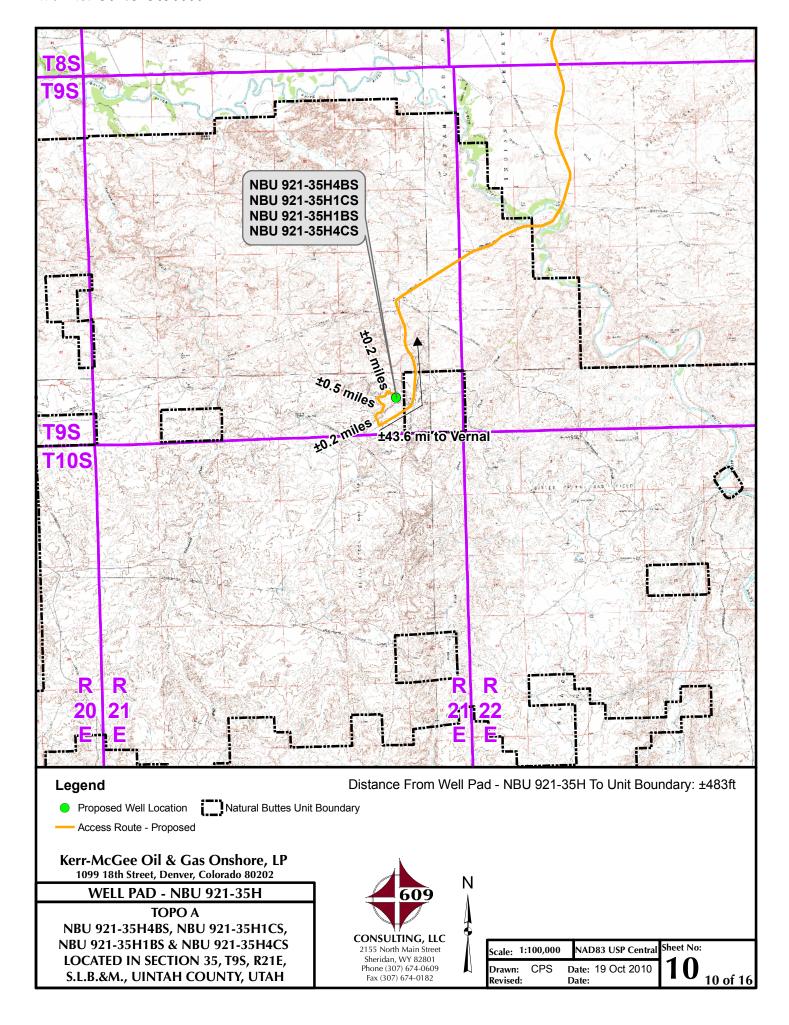
(435) 789-1365

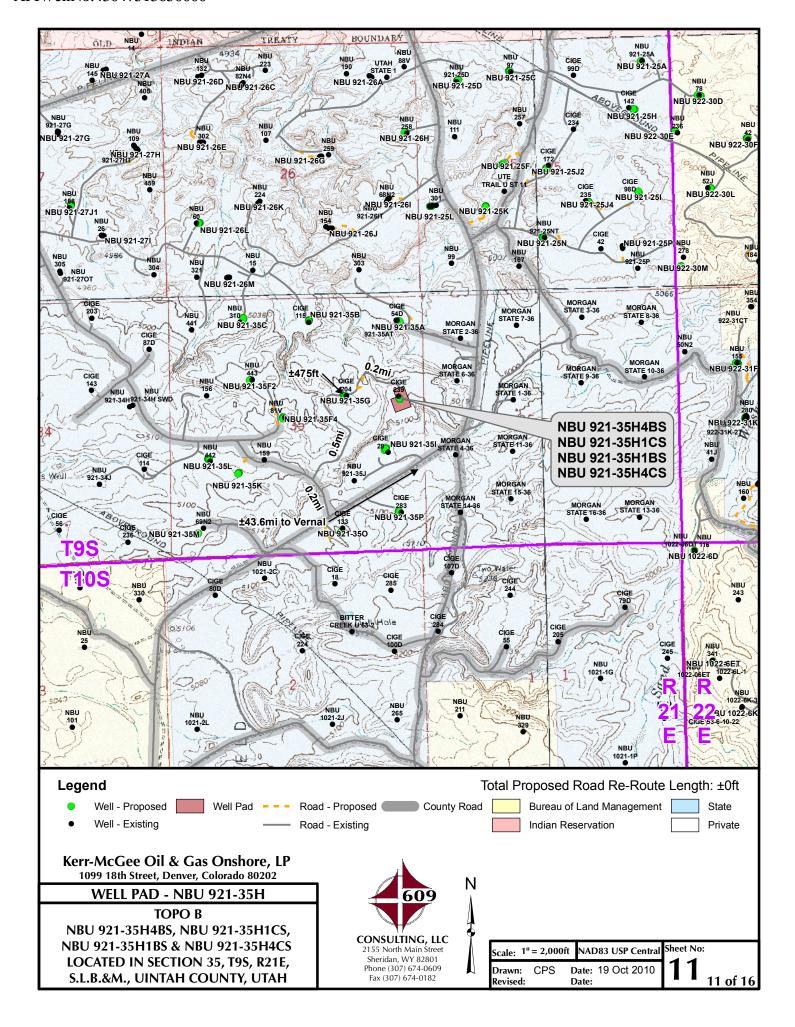
9 OF 16

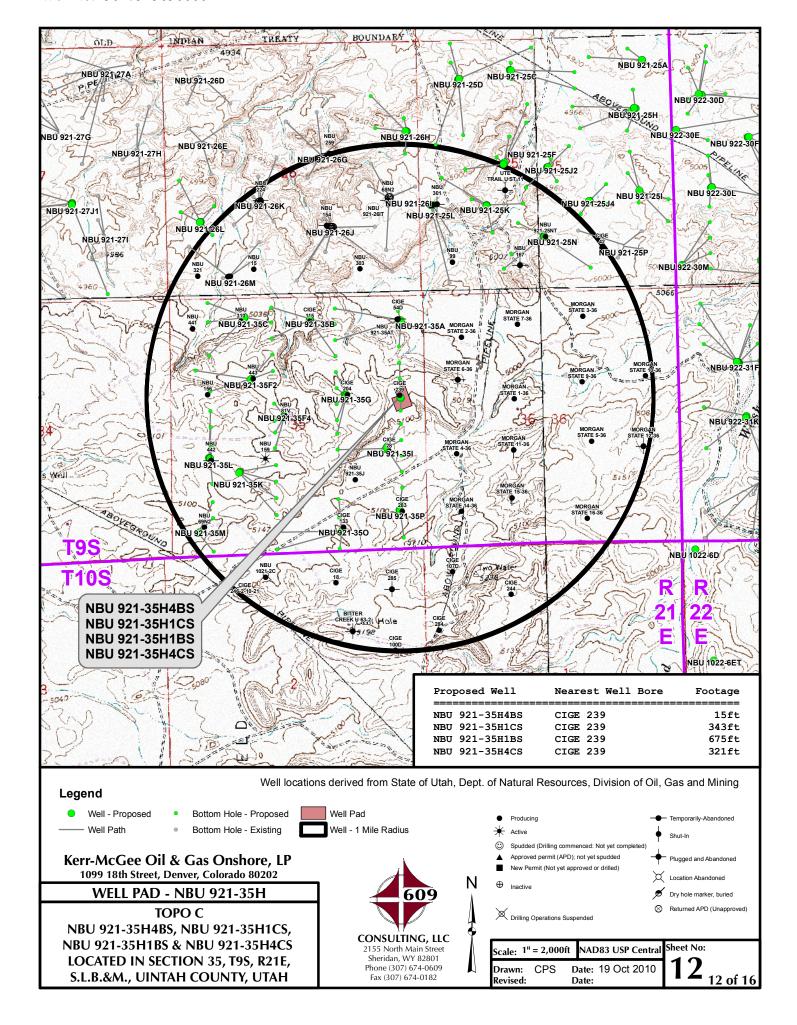
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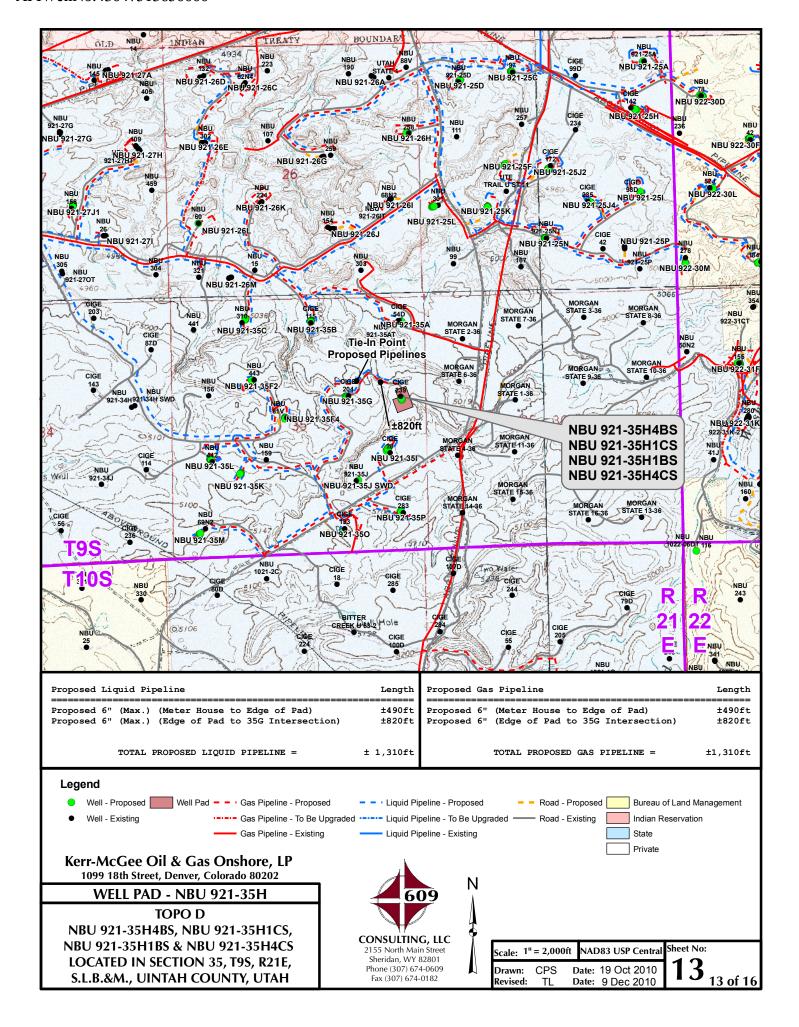
ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

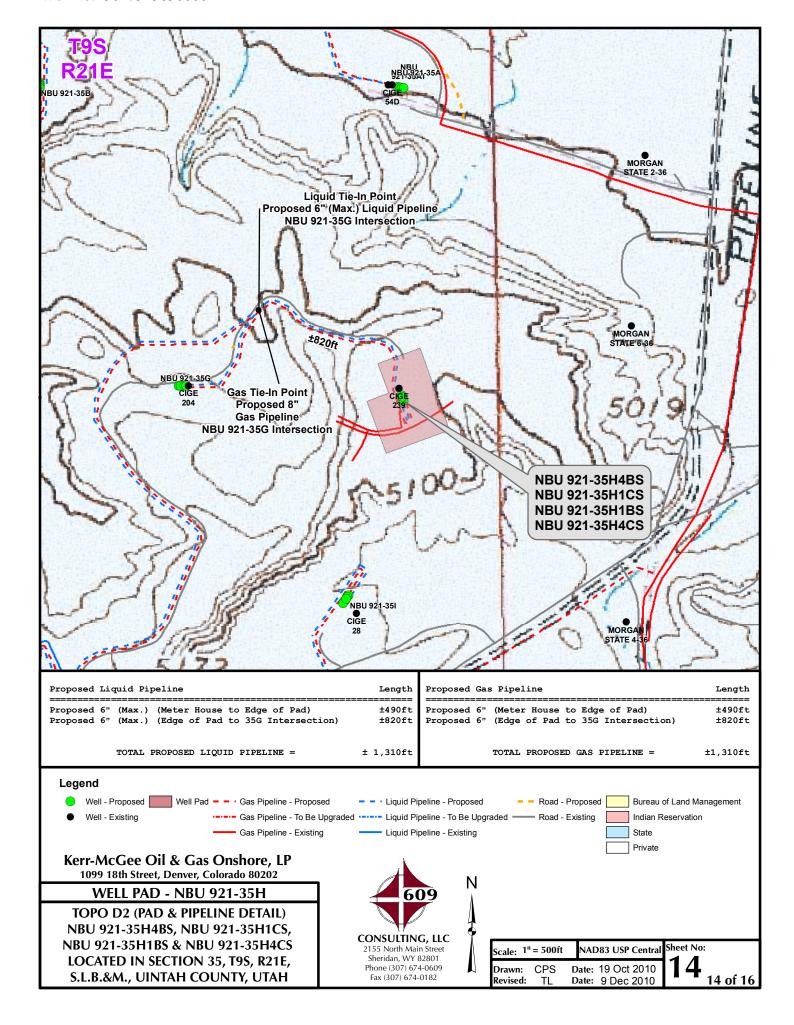
209 NORTH 300	WEST - VERNAL, CTAITON	010
DATE PHOTOS TAKEN: 9-30-10	PHOTOS TAKEN BY: M.S.B.	SHEET
DATE DRAWN: 10-01-10	DRAWN BY: E.M.S.	9

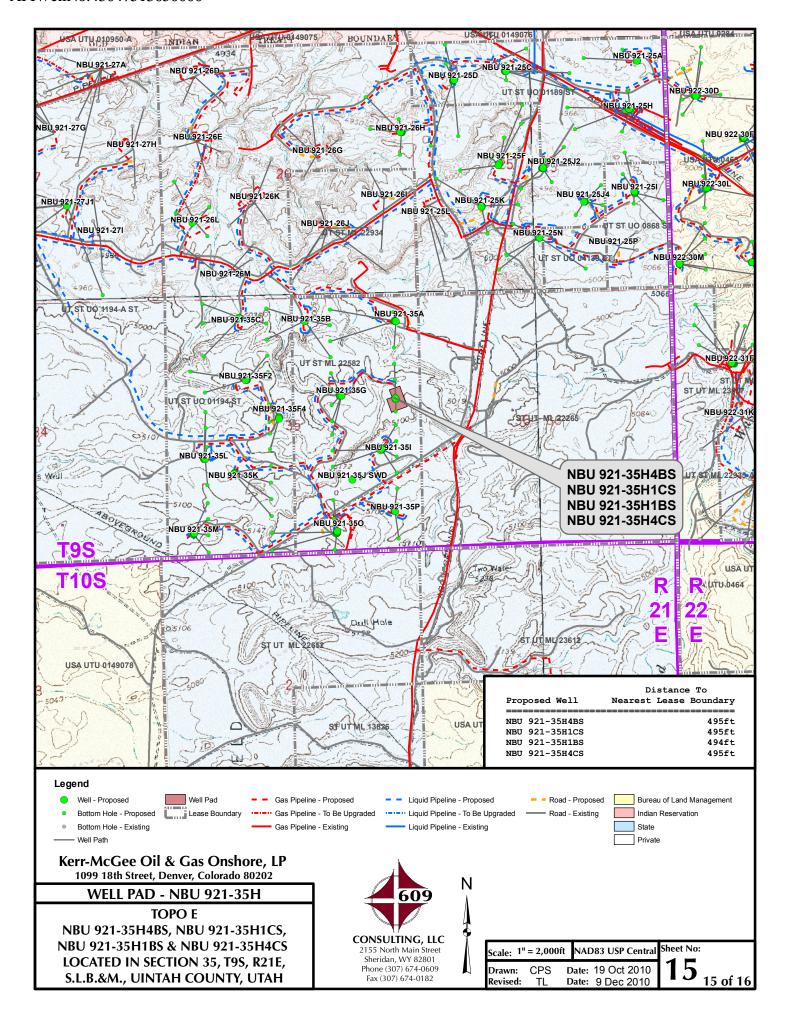












Kerr-McGee Oil & Gas Onshore, LP WELL PAD – NBU 921-35H WELLS – NBU 921-35H4BS, NBU 921-35H1CS, NBU 921-35H1BS & NBU 921-35H4CS Section 35, T9S, R21E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 20.1 miles to a Class D County Road to the northwest. Exit right and proceed in a northwesterly direction along the Class D County Road approximately 0.2 miles to a service road to the northeast. Exit right and proceed in a northeasterly direction along the service road approximately 0.5 miles to the proposed NBU 921-35G well pad. Continue in a northeasterly direction through the proposed NBU 921-35G well pad approximately 475 feet. Continue in a northeasterly then southeasterly direction approximately 0.2 miles along the service road to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 44.6 miles in a southerly direction.



Vertical Section at 359.30° (1500 ft/in)

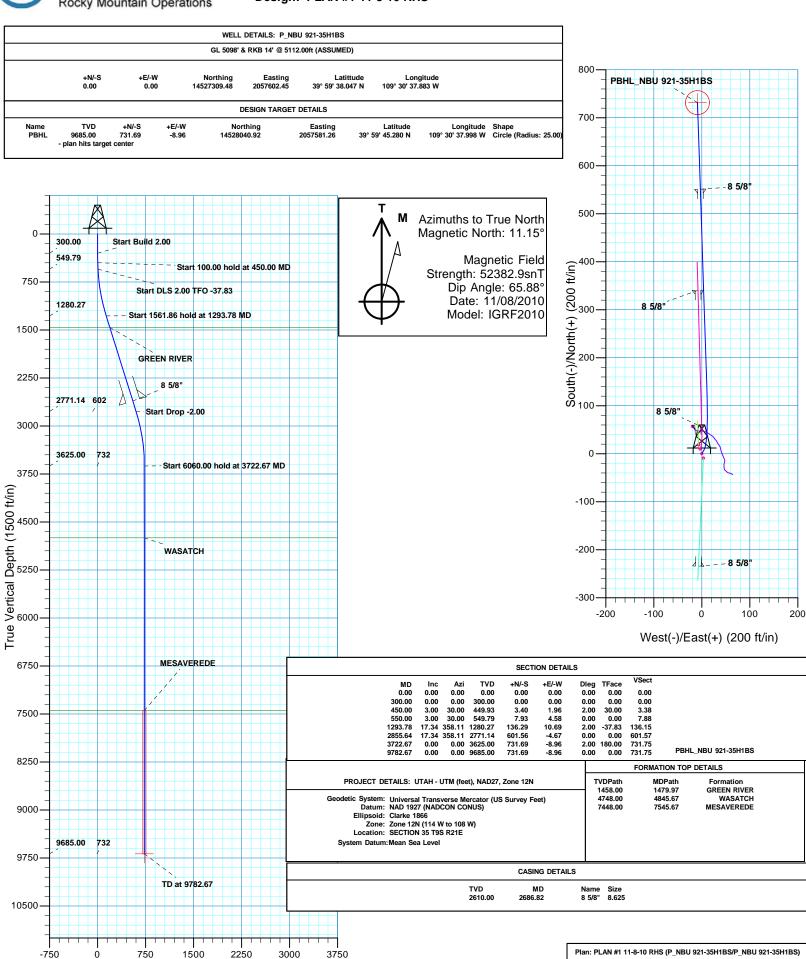
Project: UTAH - UTM (feet), NAD27, Zone 12N Site: NBU 921-35H PAD

Well: P_NBU 921-35H PAD Well: P_NBU 921-35H1BS Wellbore: P_NBU 921-35H1BS Design: PLAN #1 11-8-10 RHS



Created By: RobertScott

Date: 7:38, November 09 2010





US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N NBU 921-35H PAD P NBU 921-35H1BS

P_NBU 921-35H1BS

Plan: PLAN #1 11-8-10 RHS

Standard Planning Report

09 November, 2010





Project:

SDI Planning Report



Database: EDM5000-RobertS-Local

Company: US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

Site: NBU 921-35H PAD

 Well:
 P_NBU 921-35H1BS

 Wellbore:
 P_NBU 921-35H1BS

 Design:
 PLAN #1 11-8-10 RHS

Local Co-ordinate Reference:

Survey Calculation Method:

TVD Reference:

MD Reference:

North Reference:

Well P_NBU 921-35H1BS GL 5098' & RKB 14' @ 5112.00ft

(ASSUMED)

GL 5098' & RKB 14' @ 5112.00ft

(ASSUMED)

True

Minimum Curvature

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Universal Transverse Mercator (US Survey Feet)

Geo Datum: NAD 1927 (NADCON CONUS)

Map Zone: Zone 12N (114 W to 108 W)

OTATI OTWI (ICCI), IVIDZI, ZONC IZIV

•

Mean Sea Level

Site NBU 921-35H PAD, SECTION 35 T9S R21E

Northing: 14,527,300.44 usft Site Position: Latitude: 39° 59' 37.957 N From: Lat/Long Easting: 2,057,605.96 usft Longitude: 109° 30' 37.840 W **Position Uncertainty:** 0.00 ft Slot Radius: 13.200 in **Grid Convergence:** 0.96°

System Datum:

Well P_NBU 921-35H1BS, 2143' FNL 486' FEL

 Well Position
 +N/-S
 9.11 ft
 Northing:
 14,527,309.48 usft
 Latitude:
 39° 59' 38.047 N

+E/-W -3.36 ft Easting: 2,057,602.44 usft Longitude: 109° 30' 37.883 W

Position Uncertainty 0.00 ft Wellhead Elevation: Ground Level: 5,098.00 ft

P_NBU 921-35H1BS Wellbore Declination Field Strength Magnetics **Model Name** Sample Date Dip Angle (°) (°) (nT) IGRF2010 11/08/2010 11.16 65.88 52,383

PLAN #1 11-8-10 RHS Design **Audit Notes:** PLAN 0.00 Version: Phase: Tie On Depth: +N/-S Vertical Section: Depth From (TVD) +E/-W Direction (ft) (ft) (ft) (°) 359.30 0.00 0.00 0.00

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
450.00	3.00	30.00	449.93	3.40	1.96	2.00	2.00	0.00	30.00	
550.00	3.00	30.00	549.79	7.93	4.58	0.00	0.00	0.00	0.00	
1,293.78	17.34	358.11	1,280.27	136.29	10.69	2.00	1.93	-4.29	-37.83	
2,855.64	17.34	358.11	2,771.14	601.56	-4.67	0.00	0.00	0.00	0.00	
3,722.67	0.00	0.00	3,625.00	731.69	-8.96	2.00	-2.00	0.00	180.00	
9,782.67	0.00	0.00	9,685.00	731.69	-8.96	0.00	0.00	0.00	0.00 P	BHL_NBU 921-35





Database: EDM5000-RobertS-Local

Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-35H PAD

 Well:
 P_NBU 921-35H1BS

 Wellbore:
 P_NBU 921-35H1BS

 Design:
 PLAN #1 11-8-10 RHS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Well P_NBU 921-35H1BS

GL 5098' & RKB 14' @ 5112.00ft

(ASSUMED)

GL 5098' & RKB 14' @ 5112.00ft

(ASSUMED) True

ed Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build		00.00	200.00		2.27	4.50	0.00	0.00	2.22
400.00	2.00	30.00	399.98	1.51	0.87	1.50	2.00	2.00	0.00
450.00	3.00	30.00	449.93	3.40	1.96	3.38	2.00	2.00	0.00
Start 100.0	0 hold at 450.00 N	1D							
500.00	3.00	30.00	499.86	5.67	3.27	5.63	0.00	0.00	0.00
550.00	3.00	30.00	549.79	7.93	4.58	7.88	0.00	0.00	0.00
Start DLS 2	2.00 TFO -37.83								
600.00	3.84	20.80	599.71	10.63	5.83	10.56	2.00	1.68	-18.40
700.00	5.68	11.06	699.36	18.61	7.97	18.51	2.00	1.84	-9.74
800.00	7.60	6.14	798.68	30.04	9.62	29.92	2.00	1.92	-4.92
900.00	9.55	3.21	897.56	44.89	10.79	44.76	2.00	1.95	-2.93
1,000.00	11.52	1.28	995.87	63.15	11.48	63.01	2.00	1.97	-1.94
1,100.00	13.49	359.90	1,093.50	84.80	11.68	84.65	2.00	1.98	-1.38
1,200.00	15.48	358.87	1,190.31	109.81	11.40	109.66	2.00	1.98	-1.03
					10.69		2.00	1.99	-0.81
1,293.78	17.34	358.11	1,280.27	136.29	10.09	136.15	2.00	1.99	-0.01
	86 hold at 1293.78		4 000 04	420.45	40.00	420.00	0.00	0.00	0.00
1,300.00 1,400.00	17.34 17.34	358.11 358.11	1,286.21 1,381.66	138.15 167.93	10.63 9.64	138.00 167.80	0.00 0.00	0.00 0.00	0.00 0.00
1,479.97	17.34	358.11	1,458.00	191.76	9.0 4 8.86	191.63	0.00	0.00	0.00
GREEN RIV		330.11	1,430.00	131.70	0.00	191.00	0.00	0.00	0.00
1,500.00	17.34	358.11	1,477.12	197.72	8.66	197.60	0.00	0.00	0.00
1,600.00	17.34	358.11	1,572.57	227.51	7.68	227.40	0.00	0.00	0.00
1,700.00	17.34	358.11	1,668.03	257.30	6.69	257.20	0.00	0.00	0.00
1,800.00	17.34	358.11	1,763.48	287.09	5.71	287.00	0.00	0.00	0.00
1,900.00	17.34	358.11	1,858.94	316.88	4.73	316.80 346.60	0.00	0.00	0.00
2,000.00	17.34	358.11	1,954.39	346.67	3.75	340.00	0.00	0.00	0.00
2,100.00	17.34	358.11	2,049.85	376.46	2.76	376.40	0.00	0.00	0.00
2,200.00	17.34	358.11	2,145.30	406.25	1.78	406.19	0.00	0.00	0.00
2,300.00	17.34	358.11	2,240.76	436.04	0.80	435.99	0.00	0.00	0.00
2,400.00	17.34	358.11	2,336.21	465.83	-0.19	465.79	0.00	0.00	0.00
2,500.00	17.34	358.11	2,431.67	495.61	-1.17	495.59	0.00	0.00	0.00
2,600.00	17.34	358.11	2,527.12	525.40	-2.15	525.39	0.00	0.00	0.00
2,686.82	17.34	358.11	2,610.00	551.27	-3.01	551.26	0.00	0.00	0.00
8 5/8"									
2,700.00		358.11	2,622.58	555.19	-3.14	555.19	0.00	0.00	0.00
2,800.00	17.34	358.11	2,718.03	584.98	-4.12	584.99	0.00	0.00	0.00
2,855.64		358.11	2,771.14	601.56	-4.67	601.57	0.00	0.00	0.00
Start Drop	-2.00								
2,900.00	16.45	358.11	2,813.59	614.44	-5.09	614.46	2.00	-2.00	0.00
3,000.00	14.45	358.11	2,909.97	641.07	-5.97	641.10	2.00	-2.00	0.00
3,100.00	12.45	358.11	3,007.22	664.32	-6.74	664.36	2.00	-2.00	0.00
3,200.00	10.45	358.11	3,105.22	684.17	-7.40	684.21	2.00	-2.00	0.00
3,300.00	8.45	358.11	3,203.86	700.58	-7.94	700.63	2.00	-2.00	0.00
3,400.00		358.11	3,303.01	713.55		713.60	2.00	-2.00	
3,500.00	6.45 4.45	358.11	3,303.01	713.55 723.05	-8.36 -8.68	713.60	2.00	-2.00 -2.00	0.00 0.00
3,600.00	2.45	358.11	3,502.36	723.05 729.07	-0.00 -8.88	723.10 729.12	2.00	-2.00	0.00
3,700.00	0.45	358.11	3,602.33	731.60	-8.96	731.66	2.00	-2.00	0.00
3,722.67	0.43	0.00	3,625.00	731.69	-8.96	731.00	2.00	-2.00	0.00





Database: EDM5000-RobertS-Local

Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-35H PAD

 Well:
 P_NBU 921-35H1BS

 Wellbore:
 P_NBU 921-35H1BS

 Design:
 PLAN #1 11-8-10 RHS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Well P_NBU 921-35H1BS

GL 5098' & RKB 14' @ 5112.00ft

(ASSUMED)

GL 5098' & RKB 14' @ 5112.00ft

(ASSUMED) True

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Start 6060.00	0 hold at 3722.67	MD							
3,800.00 3,900.00 4,000.00 4,100.00 4,200.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	3,702.33 3,802.33 3,902.33 4,002.33 4,102.33	731.69 731.69 731.69 731.69 731.69	-8.96 -8.96 -8.96 -8.96	731.75 731.75 731.75 731.75 731.75	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
4,300.00 4,400.00 4,500.00 4,600.00 4,700.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	4,202.33 4,302.33 4,402.33 4,502.33 4,602.33	731.69 731.69 731.69 731.69 731.69	-8.96 -8.96 -8.96 -8.96 -8.96	731.75 731.75 731.75 731.75 731.75	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
4,800.00 4,845.67	0.00 0.00	0.00 0.00	4,702.33 4,748.00	731.69 731.69	-8.96 -8.96	731.75 731.75	0.00 0.00	0.00 0.00	0.00 0.00
WASATCH 4,900.00 5,000.00 5,100.00	0.00 0.00 0.00	0.00 0.00 0.00	4,802.33 4,902.33 5,002.33	731.69 731.69 731.69	-8.96 -8.96 -8.96	731.75 731.75 731.75	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
5,200.00 5,300.00 5,400.00 5,500.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	5,102.33 5,202.33 5,302.33 5,402.33	731.69 731.69 731.69 731.69	-8.96 -8.96 -8.96	731.75 731.75 731.75 731.75	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
5,600.00 5,700.00 5,800.00 5,900.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	5,502.33 5,602.33 5,702.33 5,802.33	731.69 731.69 731.69 731.69	-8.96 -8.96 -8.96	731.75 731.75 731.75 731.75	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
6,000.00 6,100.00	0.00 0.00	0.00 0.00	5,902.33 6,002.33	731.69 731.69	-8.96 -8.96	731.75 731.75	0.00 0.00	0.00 0.00	0.00 0.00
6,200.00 6,300.00 6,400.00 6,500.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	6,102.33 6,202.33 6,302.33 6,402.33	731.69 731.69 731.69 731.69	-8.96 -8.96 -8.96	731.75 731.75 731.75 731.75	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
6,600.00 6,700.00 6,800.00 6,900.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	6,502.33 6,602.33 6,702.33 6,802.33	731.69 731.69 731.69 731.69	-8.96 -8.96 -8.96	731.75 731.75 731.75 731.75	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
7,000.00 7,100.00	0.00 0.00	0.00 0.00	6,902.33 7,002.33	731.69 731.69	-8.96 -8.96	731.75 731.75	0.00 0.00	0.00 0.00	0.00 0.00
7,200.00 7,300.00 7,400.00 7,500.00 7,545.67	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	7,102.33 7,202.33 7,302.33 7,402.33 7,448.00	731.69 731.69 731.69 731.69 731.69	-8.96 -8.96 -8.96 -8.96	731.75 731.75 731.75 731.75 731.75	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
MESAVERE				. 200	5.53	. 3 2	0.00	0.00	
7,600.00 7,700.00 7,800.00 7,900.00 8,000.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	7,502.33 7,602.33 7,702.33 7,802.33 7,902.33	731.69 731.69 731.69 731.69 731.69	-8.96 -8.96 -8.96 -8.96	731.75 731.75 731.75 731.75 731.75	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
8,100.00 8,200.00 8,300.00	0.00 0.00 0.00	0.00 0.00 0.00	8,002.33 8,102.33 8,202.33	731.69 731.69 731.69	-8.96 -8.96 -8.96	731.75 731.75 731.75	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00





Database: EDM5000-RobertS-Local

Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-35H PAD

 Well:
 P_NBU 921-35H1BS

 Wellbore:
 P_NBU 921-35H1BS

 Design:
 PLAN #1 11-8-10 RHS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

Survey Calculation Method:

North Reference:

Minimum Curvature

True

Well P_NBU 921-35H1BS GL 5098' & RKB 14' @ 5112.00ft (ASSUMED) GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)

ned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,400.00	0.00	0.00	8,302.33	731.69	-8.96	731.75	0.00	0.00	0.00
8,500.00	0.00	0.00	8,402.33	731.69	-8.96	731.75	0.00	0.00	0.00
8,600.00	0.00	0.00	8,502.33	731.69	-8.96	731.75	0.00	0.00	0.00
8,700.00	0.00	0.00	8,602.33	731.69	-8.96	731.75	0.00	0.00	0.00
8,800.00	0.00	0.00	8,702.33	731.69	-8.96	731.75	0.00	0.00	0.00
8,900.00	0.00	0.00	8,802.33	731.69	-8.96	731.75	0.00	0.00	0.00
9,000.00	0.00	0.00	8,902.33	731.69	-8.96	731.75	0.00	0.00	0.00
9,100.00	0.00	0.00	9,002.33	731.69	-8.96	731.75	0.00	0.00	0.00
9,200.00	0.00	0.00	9,102.33	731.69	-8.96	731.75	0.00	0.00	0.00
9,300.00	0.00	0.00	9,202.33	731.69	-8.96	731.75	0.00	0.00	0.00
9,400.00	0.00	0.00	9,302.33	731.69	-8.96	731.75	0.00	0.00	0.00
9,500.00	0.00	0.00	9,402.33	731.69	-8.96	731.75	0.00	0.00	0.00
9,600.00	0.00	0.00	9,502.33	731.69	-8.96	731.75	0.00	0.00	0.00
9,700.00	0.00	0.00	9,602.33	731.69	-8.96	731.75	0.00	0.00	0.00
9,782.67	0.00	0.00	9,685.00	731.69	-8.96	731.75	0.00	0.00	0.00
TD at 9782.6	7 - PBHL_NBU 9	21-35H1BS							

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 921-35H1B: - plan hits target cent - Circle (radius 25.00		0.00	9,685.00	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W

Casing Points					
	Measured	Vertical		Casing	Hole
	Depth	Depth		Diameter	Diameter
	(ft)	(ft)	Name	(in)	(in)
	2,686.82	2,610.00	8 5/8"	8.625	11.000

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,479.97	1,458.00	GREEN RIVER				
	4,845.67	4,748.00	WASATCH				
	7,545.67	7,448.00	MESAVEREDE				



US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N NBU 921-35H PAD P_NBU 921-35H1BS

P_NBU 921-35H1BS

Plan: PLAN #1 11-8-10 RHS

Standard Planning Report - Geographic

09 November, 2010





Project:

SDI Planning Report - Geographic



EDM5000-RobertS-Local Database:

Company: US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

Site: NBU 921-35H PAD Well: P_NBU 921-35H1BS P_NBU 921-35H1BS

Wellbore: Design: PLAN #1 11-8-10 RHS **Local Co-ordinate Reference:**

Survey Calculation Method:

TVD Reference:

MD Reference:

North Reference:

GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)

GL 5098' & RKB 14' @ 5112.00ft

Well P_NBU 921-35H1BS

(ASSUMED)

True

Minimum Curvature

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System:

NAD 1927 (NADCON CONUS) Geo Datum: Map Zone: Zone 12N (114 W to 108 W)

Universal Transverse Mercator (US Survey Feet) System Datum: Mean Sea Level

Site NBU 921-35H PAD, SECTION 35 T9S R21E Northing: 14,527,300.44 usft Site Position: Latitude: 39° 59' 37.957 N 109° 30' 37.840 W 2,057,605.96 usft Lat/Long Easting: From: Longitude: 0.00 ft Slot Radius: 13.200 in 0.96 **Position Uncertainty: Grid Convergence:**

P_NBU 921-35H1BS, 2143' FNL 486' FEL Well **Well Position** 39° 59' 38.047 N +N/-S 0.00 ft Northing: 14,527,309.48 usft Latitude: +E/-W 0.00 ft 2,057,602.44 usft Longitude: 109° 30' 37.883 W Easting: 0.00 ft 5,098.00 ft **Position Uncertainty** Wellhead Elevation: **Ground Level:**

Wellbore P_NBU 921-35H1BS Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (nT) (°) IGRF2010 52,383 11/08/2010 11.16 65.88

PLAN #1 11-8-10 RHS Design **Audit Notes:** PLAN 0.00 Version: Phase: Tie On Depth: +N/-S Vertical Section: Depth From (TVD) +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 359.30

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
						, ,	,	· ·		•
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
450.00	3.00	30.00	449.93	3.40	1.96	2.00	2.00	0.00	30.00	
550.00	3.00	30.00	549.79	7.93	4.58	0.00	0.00	0.00	0.00	
1,293.78	17.34	358.11	1,280.27	136.29	10.69	2.00	1.93	-4.29	-37.83	
2,855.64	17.34	358.11	2,771.14	601.56	-4.67	0.00	0.00	0.00	0.00	
3,722.67	0.00	0.00	3,625.00	731.69	-8.96	2.00	-2.00	0.00	180.00	
9,782.67	0.00	0.00	9,685.00	731.69	-8.96	0.00	0.00	0.00	0.00 PF	3HL NBU 921-





EDM5000-RobertS-Local Database:

US ROCKIES REGION PLANNING Company:

Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: NBU 921-35H PAD Well: P_NBU 921-35H1BS Wellbore: P_NBU 921-35H1BS Design: PLAN #1 11-8-10 RHS Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Well P_NBU 921-35H1BS

GL 5098' & RKB 14' @ 5112.00ft

(ASSUMED)

GL 5098' & RKB 14' @ 5112.00ft

(ASSUMED) True

Measured Depth (ft) Vertical (°) Wap (°) Map (ft) Map (mt) Map (mt) Map (mst) Latitude 0.00 0.00 0.00 0.00 0.00 0.00 14,527,309.48 2,057,602.44 39° 59' 38.047 N 300.00 0.00 0.00 0.00 0.00 0.00 14,527,309.48 2,057,602.44 39° 59' 38.047 N 300.00 0.00 0.00 0.00 0.00 0.00 14,527,309.48	Longitude 109° 30' 37.883 W 109° 30' 37.883 W 109° 30' 37.883 W 109° 30' 37.872 W
100.00 0.00 0.00 100.00 0.00 0.00 14,527,309.48 2,057,602.44 39° 59' 38.047 N 200.00 0.00 0.00 200.00 0.00 0.00 14,527,309.48 2,057,602.44 39° 59' 38.047 N	109° 30' 37.883 W 109° 30' 37.883 W 109° 30' 37.883 W
	109° 30' 37.883 W
A. (B. 11.6.4)	109° 30' 37.872 W
Start Build 2.00 400.00 2.00 30.00 399.98 1.51 0.87 14,527,311.01 2,057,603.29 39° 59' 38.062 N 450.00 3.00 30.00 449.93 3.40 1.96 14,527,312.92 2,057,604.35 39° 59' 38.081 N	109° 30' 37.858 W
Start 100.00 hold at 450.00 MD	
500.00 3.00 30.00 499.86 5.67 3.27 14,527,315.20 2,057,605.62 39° 59' 38.103 N	109° 30' 37.841 W
550.00 3.00 30.00 549.79 7.93 4.58 14,527,317.49 2,057,606.89 39° 59' 38.126 N Start DLS 2.00 TFO -37.83	109° 30' 37.824 W
600.00 3.84 20.80 599.71 10.63 5.83 14,527,320.21 2,057,608.09 39° 59' 38.152 N	109° 30' 37.808 W
700.00 5.68 11.06 699.36 18.61 7.97 14,527,328.23 2,057,610.10 39° 59′ 38.231 N	109° 30' 37.780 W
800.00 7.60 6.14 798.68 30.04 9.62 14,527,339.68 2,057,611.56 39° 59' 38.344 N	109° 30' 37.759 W
900.00 9.55 3.21 897.56 44.89 10.79 14,527,354.55 2,057,612.49 39° 59' 38.491 N	109° 30' 37.744 W
1,000.00 11.52 1.28 995.87 63.15 11.48 14,527,372.82 2,057,612.87 39° 59' 38.671 N	109° 30' 37.735 W
1,100.00 13.49 359.90 1,093.50 84.80 11.68 14,527,394.47 2,057,612.71 39° 59' 38.885 N	109° 30' 37.733 W
1,200.00 15.48 358.87 1,190.31 109.81 11.40 14,527,419.47 2,057,612.00 39° 59' 39.133 N	109° 30' 37.736 W
1,293.78 17.34 358.11 1,280.27 136.29 10.69 14,527,445.94 2,057,610.85 39° 59' 39.394 N	109° 30' 37.745 W
Start 1561.86 hold at 1293.78 MD	
1,300.00 17.34 358.11 1,286.21 138.15 10.63 14,527,447.79 2,057,610.76 39° 59' 39.413 N	109° 30' 37.746 W
1,400.00 17.34 358.11 1,381.66 167.93 9.64 14,527,477.56 2,057,609.28 39° 59' 39.707 N	109° 30' 37.759 W
1,479.97 17.34 358.11 1,458.00 191.76 8.86 14,527,501.36 2,057,608.10 39° 59' 39.943 N	109° 30' 37.769 W
GREEN RIVER	
1,500.00 17.34 358.11 1,477.12 197.72 8.66 14,527,507.32 2,057,607.80 39° 59' 40.002 N	109° 30' 37.771 W
1,600.00 17.34 358.11 1,572.57 227.51 7.68 14,527,537.09 2,057,606.32 39° 59' 40.296 N	109° 30' 37.784 W
1,700.00 17.34 358.11 1,668.03 257.30 6.69 14,527,566.86 2,057,604.84 39° 59' 40.590 N	109° 30' 37.797 W
1,800.00 17.34 358.11 1,763.48 287.09 5.71 14,527,596.63 2,057,603.36 39° 59' 40.885 N	109° 30' 37.809 W
1,900.00 17.34 358.11 1,858.94 316.88 4.73 14,527,626.40 2,057,601.88 39° 59' 41.179 N	109° 30' 37.822 W
2,000.00 17.34 358.11 1,954.39 346.67 3.75 14,527,656.17 2,057,600.39 39° 59' 41.474 N	109° 30' 37.835 W
2,100.00 17.34 358.11 2,049.85 376.46 2.76 14,527,685.94 2,057,598.91 39° 59' 41.768 N	109° 30' 37.847 W
2,200.00 17.34 358.11 2,145.30 406.25 1.78 14,527,715.70 2,057,597.43 39° 59' 42.063 N	109° 30' 37.860 W
2,300.00 17.34 358.11 2,240.76 436.04 0.80 14,527,745.47 2,057,595.95 39° 59' 42.357 N	109° 30' 37.873 W
2,400.00 17.34 358.11 2,336.21 465.83 -0.19 14,527,775.24 2,057,594.47 39° 59' 42.652 N	109° 30' 37.885 W
2,500.00 17.34 358.11 2,431.67 495.61 -1.17 14,527,805.01 2,057,592.99 39° 59' 42.946 N	109° 30' 37.898 W
2,600.00 17.34 358.11 2,527.12 525.40 -2.15 14,527,834.78 2,057,591.51 39° 59' 43.241 N	109° 30' 37.910 W
2,686.82 17.34 358.11 2,610.00 551.27 -3.01 14,527,860.62 2,057,590.22 39° 59' 43.496 N 8 5/8"	109° 30' 37.921 W
2,700.00 17.34 358.11 2,622.58 555.19 -3.14 14,527,864.55 2,057,590.03 39° 59' 43.535 N	109° 30' 37.923 W
2,800.00 17.34 358.11 2,718.03 584.98 -4.12 14,527,894.31 2,057,588.55 39° 59' 43.829 N	109° 30' 37.936 W
2,855.64 17.34 358.11 2,771.14 601.56 -4.67 14,527,910.88 2,057,587.72 39° 59' 43.993 N	109° 30' 37.943 W
Start Drop -2.00	
2,900.00 16.45 358.11 2,813.59 614.44 -5.09 14,527,923.75 2,057,587.08 39° 59' 44.121 N	109° 30' 37.948 W
3,000.00 14.45 358.11 2,909.97 641.07 -5.97 14,527,950.37 2,057,585.76 39° 59' 44.384 N	109° 30' 37.960 W
3,100.00 12.45 358.11 3,007.22 664.32 -6.74 14,527,973.60 2,057,584.60 39° 59' 44.614 N	109° 30' 37.969 W
3,200.00 10.45 358.11 3,105.22 684.17 -7.40 14,527,993.43 2,057,583.62 39° 59' 44.810 N	109° 30' 37.978 W
3,300.00 8.45 358.11 3,203.86 700.58 -7.94 14,528,009.84 2,057,582.80 39° 59' 44.972 N	109° 30' 37.985 W
3,400.00 6.45 358.11 3,303.01 713.55 -8.36 14,528,022.79 2,057,582.16 39° 59' 45.100 N	109° 30' 37.990 W
3,500.00 4.45 358.11 3,402.55 723.05 -8.68 14,528,032.28 2,057,581.68 39° 59' 45.194 N	109° 30' 37.994 W
3,600.00 2.45 358.11 3,502.36 729.07 -8.88 14,528,038.30 2,057,581.38 39° 59' 45.254 N	109° 30' 37.997 W
3,700.00 0.45 358.11 3,602.33 731.60 -8.96 14,528,040.83 2,057,581.26 39° 59' 45.279 N	109° 30' 37.998 W





EDM5000-RobertS-Local Database:

US ROCKIES REGION PLANNING Company:

Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: NBU 921-35H PAD Well: P_NBU 921-35H1BS Wellbore: P_NBU 921-35H1BS Design: PLAN #1 11-8-10 RHS Loc

TVI

MD

Nor **Survey Calculation Method:**

cal Co-ordinate Reference:	Well P_NBU 921-35H1BS
D Reference:	GL 5098' & RKB 14' @ 5112.00ft
	(ASSUMED)
Reference:	GL 5098' & RKB 14' @ 5112.00ft
	(ASSUMED)
rth Reference:	True

Planned Survey									
Measured Depth (ft)	Inclination	Azimuth	Vertical Depth (ft)	+N/-S	+E/-W	Map Northing (usft)	Map Easting (usft)		
(11)	(°)	(°)		(ft)	(ft)	(usit)	(usit)	Latitude	Longitude
3,722.67	0.00	0.00	3,625.00	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
	60.00 hold at 3								
3,800.00		0.00	3,702.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
3,900.00		0.00	3,802.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
4,000.00		0.00	3,902.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
4,100.00		0.00	4,002.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
4,200.00 4,300.00		0.00 0.00	4,102.33 4,202.33	731.69 731.69	-8.96 -8.96	14,528,040.92 14,528,040.92	2,057,581.25 2,057,581.25	39° 59' 45.280 N 39° 59' 45.280 N	109° 30' 37.998 W 109° 30' 37.998 W
4,400.00		0.00	4,202.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30′ 37.998 W
4,500.00		0.00	4,402.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30′ 37.998 W
4,600.00		0.00	4,502.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
4,700.00		0.00	4,602.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
4,800.00		0.00	4,702.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
4,845.67	0.00	0.00	4,748.00	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
WASATO			.,			,===,=	_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
4,900.00	0.00	0.00	4,802.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
5,000.00		0.00	4,902.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
5,100.00		0.00	5,002.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
5,200.00		0.00	5,102.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
5,300.00	0.00	0.00	5,202.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
5,400.00		0.00	5,302.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
5,500.00		0.00	5,402.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
5,600.00	0.00	0.00	5,502.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
5,700.00	0.00	0.00	5,602.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
5,800.00	0.00	0.00	5,702.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
5,900.00	0.00	0.00	5,802.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
6,000.00	0.00	0.00	5,902.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
6,100.00	0.00	0.00	6,002.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
6,200.00		0.00	6,102.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
6,300.00	0.00	0.00	6,202.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
6,400.00		0.00	6,302.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
6,500.00		0.00	6,402.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
6,600.00		0.00	6,502.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
6,700.00		0.00	6,602.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
6,800.00		0.00	6,702.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
6,900.00	0.00	0.00	6,802.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
7,000.00		0.00	6,902.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
7,100.00		0.00	7,002.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
7,200.00		0.00	7,102.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
7,300.00	0.00	0.00	7,202.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
7,400.00		0.00	7,302.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
7,500.00 7,545.67		0.00 0.00	7,402.33 7,448.00	731.69 731.69	-8.96 -8.96	14,528,040.92 14,528,040.92	2,057,581.25 2,057,581.25	39° 59' 45.280 N 39° 59' 45.280 N	109° 30' 37.998 W 109° 30' 37.998 W
		0.00	7,440.00	731.09	-0.90	14,520,040.92	2,007,001.20	39 39 43.200 N	109 30 37.990 W
7,600.00		0.00	7,502.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
7,700.00		0.00	7,602.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
7,800.00		0.00	7,002.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30′ 37.998 W
7,900.00		0.00	7,702.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
8,000.00		0.00	7,902.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
8,100.00		0.00	8,002.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
8,200.00		0.00	8,102.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W
8,300.00		0.00	8,202.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W





Database: EDM5000-RobertS-Local

Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-35H PAD

 Well:
 P_NBU 921-35H1BS

 Wellbore:
 P_NBU 921-35H1BS

 Design:
 PLAN #1 11-8-10 RHS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference: Survey Calculation Method: Well P_NBU 921-35H1BS

GL 5098' & RKB 14' @ 5112.00ft

(ASSUMED)

GL 5098' & RKB 14' @ 5112.00ft

(ASSUMED) True

anned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,400.00	0.00	0.00	8,302.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
8,500.00	0.00	0.00	8,402.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
8,600.00	0.00	0.00	8,502.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
8,700.00	0.00	0.00	8,602.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
8,800.00	0.00	0.00	8,702.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
8,900.00	0.00	0.00	8,802.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
9,000.00	0.00	0.00	8,902.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
9,100.00	0.00	0.00	9,002.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
9,200.00	0.00	0.00	9,102.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
9,300.00	0.00	0.00	9,202.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
9,400.00	0.00	0.00	9,302.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
9,500.00	0.00	0.00	9,402.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
9,600.00	0.00	0.00	9,502.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
9,700.00	0.00	0.00	9,602.33	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
9,782.67	0.00	0.00	9,685.00	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 V
TD at 978	32.67 - PBHL_	NBU 921-35I	H1BS						

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 921-35H1B: - plan hits target cent - Circle (radius 25.00		0.00	9,685.00	731.69	-8.96	14,528,040.92	2,057,581.25	39° 59' 45.280 N	109° 30' 37.998 W

Casing Points					
	Measured	Vertical		Casing	Hole
	Depth	Depth		Diameter	Diameter
	(ft)	(ft)	Name	(in)	(in)
	2,686.82	2,610.00	8 5/8"	8.625	11.000

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,479.97 4,845.67 7,545.67	4,748.00	GREEN RIVER WASATCH MESAVEREDE				





EDM5000-RobertS-Local Database:

Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: NBU 921-35H PAD Well: P_NBU 921-35H1BS Wellbore: P_NBU 921-35H1BS PLAN #1 11-8-10 RHS Design:

Local Co-ordinate Reference:

Survey Calculation Method:

TVD Reference: MD Reference:

North Reference:

GL 5098' & RKB 14' @ 5112.00ft

Well P_NBU 921-35H1BS

(ASSUMED)

GL 5098' & RKB 14' @ 5112.00ft

(ASSUMED)

True

n Annotations				
Measured	Vertical	Local Coor	dinates	
Depth	Depth	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
450.00	449.93	3.40	1.96	Start 100.00 hold at 450.00 MD
550.00	549.79	7.93	4.58	Start DLS 2.00 TFO -37.83
1,293.78	1,280.27	136.29	10.69	Start 1561.86 hold at 1293.78 MD
2,855.64	2,771.14	601.56	-4.67	Start Drop -2.00
3,722.67	3,625.00	731.69	-8.96	Start 6060.00 hold at 3722.67 MD
9,782.67	9,685.00	731.69	-8.96	TD at 9782.67





EDM5000-RobertS-Local Database:

US ROCKIES REGION PLANNING Company:

Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: NBU 921-35H PAD Well: P_NBU 921-35H1BS Wellbore: P_NBU 921-35H1BS Design: PLAN #1 11-8-10 RHS Local Co-ordinate Reference:

Survey Calculation Method:

TVD Reference: MD Reference:

North Reference:

GL 5098' & RKB 14' @ 5112.00ft (ASSUMED)

Well P_NBU 921-35H1BS

GL 5098' & RKB 14' @ 5112.00ft

(ASSUMED)

True

Annotations					
M	leasured	Vertical	Local Coor	dinates	
	Depth	Depth	+N/-S	+E/-W	
	(ft)	(ft)	(ft)	(ft)	Comment
	300.00	300.00	0.00	0.00	Start Build 2.00
	450.00	449.93	3.40	1.96	Start 100.00 hold at 450.00 MD
	550.00	549.79	7.93	4.58	Start DLS 2.00 TFO -37.83
	1,293.78	1,280.27	136.29	10.69	Start 1561.86 hold at 1293.78 MD
	2,855.64	2,771.14	601.56	-4.67	Start Drop -2.00
	3,722.67	3,625.00	731.69	-8.96	Start 6060.00 hold at 3722.67 MD
	9,782.67	9,685.00	731.69	-8.96	TD at 9782.67

NBU 921-35H1BS

Surface: 2,143' FNL 486' FEL (SE/4NE/4) BHL: 1,411' FNL 494' FEL (SE/4NE/4)

NBU 921-35H1CS

Surface: 2,133' FNL 490' FEL (SE/4NE/4) BHL: 1,743' FNL 495' FEL (SE/4NE/4)

NBU 921-35H4BS

Surface: 2,124' FNL 493' FEL (SE/4NE/4) BHL: 2,075' FNL 495' FEL (SE/4NE/4)

NBU 921-35H4CS

Surface: 2,152' FNL 483' FEL (SE/4NE/4) BHL: 2,407' FNL 495' FEL (SE/4NE/4)

> Pad: NBU 921-35H Section 35 T9S R21E Mineral Lease: ML 22582

Uintah County, Utah Operator: Kerr-McGee Oil & Gas Onshore LP

MULTI-POINT SURFACE USE PLAN of OPERATIONS (SUPO)

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including, but not limited to, APDs/SULAs/ROEs/ROWs and/or easements).

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

A. <u>Existing Roads</u>:

Existing roads consist of county roads and improved/unimproved lease roads. APC/KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each

other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

B. Planned Access Roads:

No new access road is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

Where roads are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

Turnouts; major cut and fills; culverts; bridges; gates; cattle guards; low water crossings; or modifications needed to existing infrastructure/facilities were determined at the on-site and, as applicable, are typically shown on attached Exhibits and Topo maps.

C. <u>Location of Existing and Proposed Facilities</u>:

This pad will expand the existing pad for the CIGE 239. This well location is a producing vertical well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of November 11, 2010.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of each well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) aboveground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Production tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks are not to be used for disposal of liquids from additional sources without prior approval of UDOGM. Gathering facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is $\pm 1,610$ ' and the individual segments are broken up as follows:

±490' (0.1 miles) –New 6" buried gas pipeline from the meter to the edge of the pad.

 $\pm 1,120$ ' (0.2 miles) –New 6" buried gas pipeline from the edge of pad to the NBU 921-35G pad intersection.

The total liquid gathering pipeline distance from the separator to the tie in point is $\pm 1,610$ ' and the individual segments are broken up as follows:

 ± 490 ' (0.1 miles) –New 6" buried liquid pipeline from the separator to the edge of the pad. $\pm 1,120$ ' (0.2 miles) –New 6" buried liquid pipeline from the edge of pad to the NBU 921-35G pad intersection.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. Kerr-McGee requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, Kerr-McGee requests a temporary 45' construction right-of-way and 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

D. <u>Location and Type of Water Supply:</u>

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

E. Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

F. <u>Methods of Handling Waste Materials</u>:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E

Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E

Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

Ouray #1 SWD in Sec. 1 T9S R21E NBU 159 SWD in Sec. 35 T9S R21E

CIGE 112D SWD in Sec. 19 T9S R21E CIGE 114 SWD in Sec. 34 T9S R21E

CIGE 114 SWD in Sec. 34 T9S R21E NBU 921-34K SWD in Sec. 34 T9S R21E NBU 921-33F SWD in Sec. 33 T9S R21E NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless otherwise approved, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20-mil or thicker, The liner

will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary to subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, accidental release, or in excess of reportable quantities will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule, and, where State wells are participatory to a Federal agreement, according to NTL-3A.

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

G. Ancillary Facilities:

None are anticipated.

H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1983 (NAD83) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

I. Plans for Reclamation of the Surface:

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but are not limited to: re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

Final Reclamation

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by APC/KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-

vegetation. The site specific seed mix will be provided by SITLA.

J. <u>Surface/Mineral Ownership</u>:

SITLA 675 East 500 South, Suite 500 Salt Lake City, UT 84102

K. Other Information:

None

M. Lessee's or Operators' Representative & Certification:

Danielle Piernot Regulatory Analyst I Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6156 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Danielle Piernot

November 19, 2010

Date



Kerr-McGee Oil & Gas Onshore LP PO Box 173779 DENVER, CO 80217-3779

October 27, 2010

Ms. Diana Mason Division of Oil, Gas and Mining P.O. Box 145801 Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11

NBU 921-35H1BS

T9S-R21E

Section 35: SENE (Surf), SENE (Bottom)

Surface: 2143' FNL, 486' FEL Bottom Hole: 1411' FNL, 494' FEL

Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee's NBU 921-35H1BS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

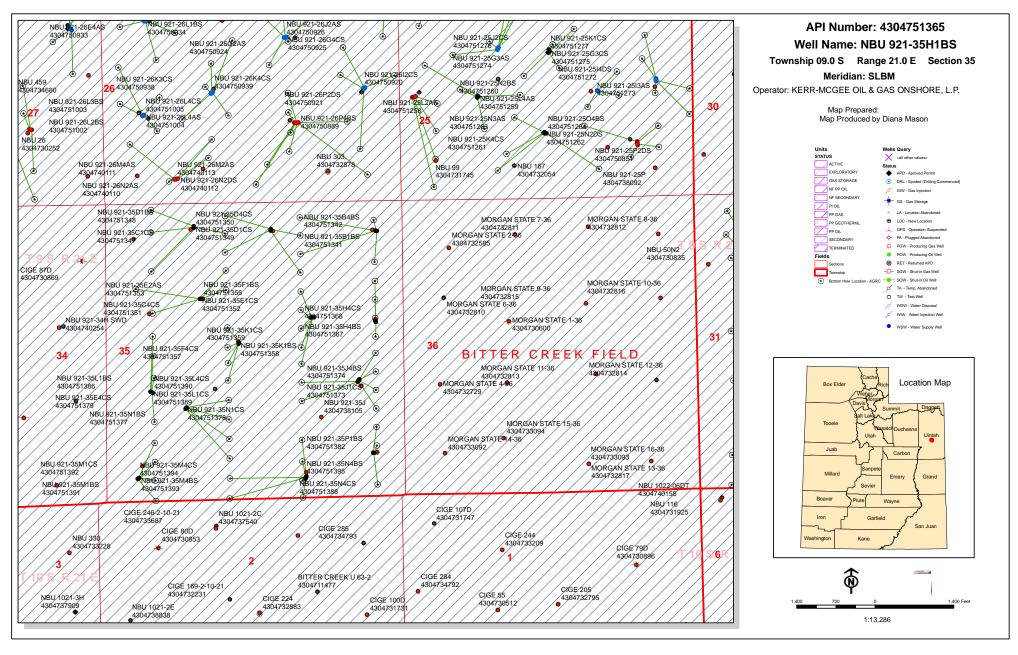
Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joe Matney

Sr. Staff Landman

Joe Matines



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office P.O. Box 45155 Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

December 1, 2010

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2010 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 921-35F2 Pad

43-047-51355 NBU 921-35F1BS Sec 35 T09S R21E 1684 FNL 1709 FWL BHL Sec 35 T09S R21E 1531 FNL 2146 FWL

NBU 921-35F4 PAD

43-047-51356 NBU 921-35F4BS Sec 35 T09S R21E 2473 FNL 2358 FWL

BHL Sec 35 T09S R21E 2210 FNL 2158 FWL

43-047-51357 NBU 921-35F4CS Sec 35 T09S R21E 2483 FNL 2358 FWL

BHL Sec 35 T09S R21E 2567 FNL 2159 FWL

43-047-51358 NBU 921-35K1BS Sec 35 T09S R21E 2493 FNL 2358 FWL BHL Sec 35 T09S R21E 2484 FSL 2161 FWL

43-047-51359 NBU 921-35K1CS Sec 35 T09S R21E 2503 FNL 2357 FWL

BHL Sec 35 T09S R21E 2163 FSL 2155 FWL

NBU 921-35G Pad

43-047-51360 NBU 921-35G1BS Sec 35 T09S R21E 2053 FNL 1633 FEL

BHL Sec 35 T09S R21E 1583 FNL 1819 FEL

BHL Sec 35 T09S R21E 1916 FNL 1820 FEL

BHL Sec 35 T09S R21E 2250 FNL 1822 FEL

API #	WELL NAME LOCATION				N					
(Proposed PZ	WASA	ATCH-MESA VERDI	Ε)							
43-047-51363	NBU	921-35G4CS BHL								
43-047-51364	NBU	921-35J1BS BHL	Sec Sec	35 35	T09S T09S	R21E R21E	2053 2419	FNL FSL	1613 1824	FEL FEL
NBU 921-35H PAI)									
43-047-51365	NBU	921-35H1BS BHL								
43-047-51366	NBU	921-35H1CS BHL								
43-047-51367	NBU	921-35H4BS BHL								
43-047-51368 NBU 921-35I PAD		921-35H4CS BHL	Sec Sec	35 35	T09S T09S	R21E R21E	2152 2407	FNL FNL	0483 0495	FEL FEL
NBU 921-351 PAD										
43-047-51369	NBU	921-35I1BS BHL								
43-047-51370	NBU	921-35I1CS BHL								
43-047-51371	NBU	921-35I4BS BHL								
43-047-51372	NBU	921-35I4CS BHL								
43-047-51373	NBU	921-35J1CS BHL				R21E R21E				
		921-35J4BS BHL				R21E R21E				
NBU 921-35K PAI	J									
43-047-51375	NBU	921-35K4BS BHL				R21E R21E		_		
43-047-51376	NBU	921-35K4CS BHL				R21E R21E				
43-047-51377	NBU	921-35N1BS BHL				R21E R21E				
43-047-51378	NBU	921-35N1CS BHL				R21E R21E				

API #	WE:	LL NAME	NAME			LOCATION				
NBU 921-35L PAI)									
43-047-51379	NBU	921-35E4CS BHL								
43-047-51386	NBU	921-35L1BS BHL								
43-047-51389	NBU	921-35L1CS BHL								
		921-35L4CS BHL								
NBU 921-35P PAI	י									
43-047-51380	NBU	921-35P4CS BHL				R21E R21E				
43-047-51381	NBU	921-35P1CS BHL				R21E R21E				
		921-35P1BS BHL								
NBU 921-350 PAI	ט									
43-047-51383	NBU	921-3504CS BHL				R21E R21E				
43-047-51384	NBU	921-3504BS BHL								
43-047-51385	NBU	921-3501CS BHL								
43-047-51387	NBU	921-3501BS BHL				R21E R21E				
43-047-51388	NBU	921-35N4CS BHL				R21E R21E				
43-047-51395	NBU	921-35N4BS BHL				R21E R21E				
NBU 921-35M PA	D									
43-047-51391	NBU	921-35M1BS BHL				R21E R21E				
43-047-51392	NBU	921-35M1CS BHL				R21E R21E				

Page 4

API # WELL NAME LOCATION

43-047-51393 NBU 921-35M4BS Sec 35 T09S R21E 0478 FSL 0543 FWL BHL Sec 35 T09S R21E 0423 FSL 0831 FWL 43-047-51394 NBU 921-35M4CS Sec 35 T09S R21E 0464 FSL 0517 FWL BHL Sec 35 T09S R21E 0055 FSL 0834 FWL

This office has no objection to permitting the wells at this time.



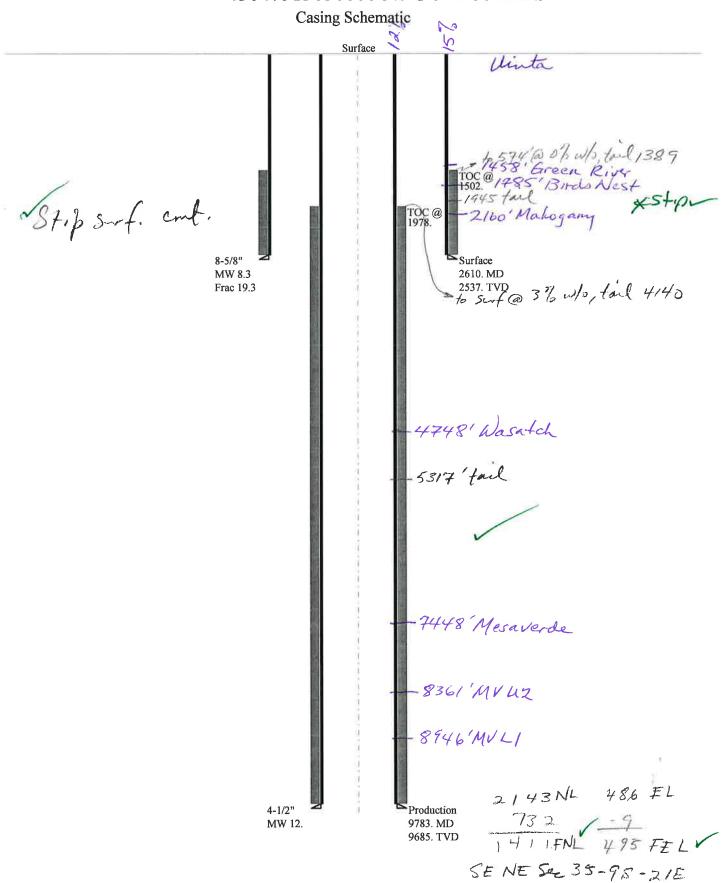
bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:12-1-10

BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-35H1BS 43047513650000

Well Name		KERR-MCGEE C	OIL	& GAS ONSHO	ORI	E, L.P. NBU 921-	35H′	11BS 430475136
String		Surf	T,	Prod				
Casing Size(")		8.625	Ī	4.500			Ī	
Setting Depth (TVD)		2537	Ī	9685			Ī	
Previous Shoe Setting Dept	th (TVD)	40	Ī	2537			Ī	
Max Mud Weight (ppg)		8.3	Ī	12.0			Ī	
BOPE Proposed (psi)		500	Ī	5000			Ī	
Casing Internal Yield (psi)		3390	Ï	7780			Ť	
Operators Max Anticipate	d Pressure (psi)	5908	H	11.7			Ť	
			1.		_		100	
Calculations	Sui	rf String				8.0	625	5 "
Max BHP (psi)		.052*Sett	in	g Depth*N	4V	V= 1099		Ĭ
								BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)		ax BHP-(0.12 ³				1		NO air drill
MASP (Gas/Mud) (psi)	Ma	ax BHP-(0.22*	*S	Setting Dep	th	i)= ₅₄₁		NO OK
			_	~ ~	_			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe		Depth - Previo	ous	s Shoe Dep	oth)= ₅₅₀		NO Reasonable depth in area
Required Casing/BOPE To						2373		psi
*Max Pressure Allowed @	Previous Casing Shoe=		_		_	40		psi *Assumes 1psi/ft frac gradient
Calculations	Pro	od String				4.5	500	0 "
Max BHP (psi)		_	in	g Depth*N	4V			1
(4**)				8 - P		1 0040		BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Ma	ax BHP-(0.12*	*S	Setting Dep	oth)= 4881		YES
MASP (Gas/Mud) (psi)		ax BHP-(0.22*	_		_	1		YES OK
· / u /			_	<u> </u>	_	7 130.2		*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting I	Depth - Previo	ous	s Shoe Dep	oth)= ₄₄₇₀		NO Reasonable
Required Casing/BOPE To	est Pressure=					5000		psi
*Max Pressure Allowed @	Previous Casing Shoe=					2537		psi *Assumes 1psi/ft frac gradient
						1,		, , , , , , , , , , , , , , , , , , ,
Calculations		String						"
Max BHP (psi)		.052*Sett	in	g Depth*N	4V	V=		Ī
								BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)		ax BHP-(0.12 ³				,		NO .
MASP (Gas/Mud) (psi)	Ma	ax BHP-(0.22*	*S	Setting Dep	th	1)=		NO
			_		_			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	<u> </u>	Depth - Previo	ous	s Shoe Dep	oth	1)=		NO
Required Casing/BOPE To			_			_		j psi
*Max Pressure Allowed @	Previous Casing Shoe=							psi *Assumes 1psi/ft frac gradient
Calculations	<u> </u>	String	_		_		_	lii e
Max BHP (psi)			in	g Depth*N	4V	V=		1
						<u>'</u>		BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Ma	ax BHP-(0.12*	*S	Setting Dep	oth)=		NO I
MASP (Gas/Mud) (psi)	Ma	ax BHP-(0.22*	*S	Setting Dep	th)=		NO
			_			Ti-		*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting Γ	Depth - Previo	ous	s Shoe Dep	oth	i)=		NO NO
Required Casing/BOPE To	est Pressure=							psi
*Max Pressure Allowed @	Previous Casing Shoe=							psi *Assumes 1psi/ft frac gradient

43047513650000 NBU 921-35H1BS



Well name:

43047513650000 NBU 921-35H1BS

Operator:

KERR-MCGEE OIL & GAS ONSHORE, L.P.

String type:

Project ID:

Surface

43-047-51365

Location:

Collapse

UINTAH

COUNTY

8.330 ppg

Environment: Minimum design factors:

Collapse:

Design factor

H2S considered? No Surface temperature:

74 °F

Design is based on evacuated pipe.

1.125

1.00

1.80 (J)

1.70 (J)

1.60 (J)

1.50 (J)

1.50 (B)

Bottom hole temperature: Temperature gradient:

110 °F 1.40 °F/100ft

Minimum section length:

Cement top:

100 ft

1,502 ft

Burst: Design factor

Burst

Max anticipated surface

pressure: Internal gradient: Calculated BHP

Design parameters:

Mud weight:

2,297 psi 0.120 psi/ft

2,601 psi

No backup mud specified.

Tension: 8 Round STC: 8 Round LTC:

Buttress: Premium: Body yield:

Tension is based on air weight. Neutral point: 2,284 ft

Directional well information:

Kick-off point 300 ft Departure at shoe: 528 ft Maximum dogleg: 2 °/100ft

17.34° Inclination at shoe:

Re subsequent strings: Next setting depth: 9,685 ft 12.000 ppg Next mud weight: Next setting BHP: 6,038 psi Fracture mud wt: 19.250 ppg Fracture depth: 2,610 ft

Injection pressure: 2,610 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2610	8.625	28.00	I-55	LT&C	2537	2610	7.892	103356
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1098	1880	1.713	2601	3390	1.30	71	348	4.90 J

Prepared

Helen Sadik-Macdonald Div of Oil, Gas & Mining

Phone: 801 538-5357 FAX: 801-359-3940

Date: December 13,2010 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2537 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Well name:

43047513650000 NBU 921-35H1BS

Operator:

Design parameters:

Internal fluid density:

Mud weight:

KERR-MCGEE OIL & GAS ONSHORE, L.P.

String type:

Production

Project ID:

43-047-51365

Location:

Collapse

UINTAH

COUNTY

Environment: Minimum design factors:

1.125

Collapse:

Design factor

H2S considered?

Surface temperature:

No 74 °F 210 °F Bottom hole temperature:

Temperature gradient: Minimum section length: 1.40 °F/100ft 100 ft

Burst:

Design factor

1.00

Cement top:

1,978 ft

Burst

Max anticipated surface

No backup mud specified.

pressure: Internal gradient: Calculated BHP

3,907 psi 0.220 psi/ft

12.000 ppg

1.000 ppg

6,038 psi

Premium: Body yield:

Tension: 8 Round STC:

1.80 (J) 8 Round LTC: 1.80 (J) **Buttress:** 1.60 (J) 1.50 (J)

1.60 (B)

Tension is based on air weight. Neutral point: 8,046 ft

Directional well information:

Kick-off point Departure at shoe:

300 ft 732 ft 2 °/100ft

Maximum dogleg: Inclination at shoe:

0°

Run Seq	Segment Length	Size	Nominal Weight	Grade	End Finish	True Vert Depth	Measured Depth	Drift Diameter	Est. Cost
	(ft)	(in)	(lbs/ft)			(ft)	(ft)	(in)	(\$)
1	9783	4.5	11.60	I-80	LT&C	9685	9783	3.875	129136
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension
Seq	Load	Strength	Design	Load	Strength	Design	Load	Strength	Design
·	(psi)	(psi)	Factor	(psi)	(psi)	Factor	(kips)	(kips)	Factor
1	5534	6360	1.149	6038	7780	1.29	112.3	212	1.89 J

Prepared

Helen Sadik-Macdonald Div of Oil, Gas & Mining

Phone: 801 538-5357 FAX: 801-359-3940

Date: December 13,2010 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9685 ft, a mud weight of 12 ppg. An internal gradient of .052 psi/ft was used for collapse from TD to Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

From: Jim Davis

To: Bonner, Ed; Hill, Brad; Mason, Diana

CC: Curry, Kristine; Danielle Piernot; Garrison, LaVonne; Hayden, Martha;...

Date: 12/22/2010 5:49 AM

Subject: Kerr McGee APD approvals in 9S 21E Sec 35 **Attachments:** KMG approvals 921-35 on 12.22.2010.xls

The following wells have been approved by SITLA under the following arch and paleo stipulations. This is a long list, so I'm attaching a spreadsheet with the same information.

A note on arch and paleo stipulations: Wells that have an arch note "non-significant site" do not need to be avoided or mitigated. Only those that say "needs to be avoided".

The paleo reports make recommendations for "spot paleo monitoring" or "full paleo monitoring". It is my understanding that Kerr McGee is taking these stipulations and doing full monitoring in either case, in an abundance of caution.

-Jim Davis

Well Name API Paleo Stipulation	ons Arch Stipulation	ns
Kerr-McGee's NBU 921-35A1BS	API #4304751339	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		,
Kerr-McGee's NBU 921-35A4CS	API #4304751340	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35B1BS	API #4304751341	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35B4BS	API #4304751342	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35B1CS	API #4304751343	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; eligible site 42Ur	n6461, just south of prope	
Kerr-McGee's NBU 921-35B4CS	API #4304751344	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; eligible site 42Ur		
Kerr-McGee's NBU 921-35C1BS	API #4304751345	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; eligible site 42Ur	n6461, just south of prope	
Kerr-McGee's NBU 921-35C4BS	API #4304751346	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; eligible site 42Ur	n6461, just south of prope	
Kerr-McGee's NBU 921-35C1CS	API #4304751347	IPC 10-97 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35D1BS	API #4304751348	IPC 10-97 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35D1CS	API #4304751349	IPC 10-97 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35D4CS	API #4304751350	IPC 10-97 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35C4CS	API #4304751351	IPC 10-97 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35E1CS	API #4304751352	IPC 10-97 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35E2AS	API #4304751353	IPC 10-97 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35F1BS	API #4304751355	IPC 10-97 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35F4BS	API #4304751356	IPC 10-97 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35F4CS	API #4304751357	IPC 10-97 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35K1BS	API #4304751358	IPC 10-97 Full Paleo Monitoring (U-07-

110 (10=1)		
MQ-1437b,i,p,s)	. =	
Kerr-McGee's NBU 921-35K1CS	API #4304751359	IPC 10-97 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35G1BS	API #4304751360	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant	site, 42Un2395, adjacer	
Kerr-McGee's NBU 921-35G1CS	API #4304751361	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant	site, 42Un2395, adjacer	nt to the road)
Kerr-McGee's NBU 921-35G4BS	API #4304751362	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant		
	API #4304751363	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant		,
Kerr-McGee's NBU 921-35J1S API #43		0-98 Spot Paleo Monitoring (U-07-
MQ-1437b,i,p,s; 1 non-significant site, 4		
Kerr-McGee's NBU 921-35H1BS	API #4304751365	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)	AFT#4304751305	IFC 10-96 Spot Faled Monitoring
	ADI #42047E4266	IDC 10.00 Cnot Doloo Monitoring
Kerr-McGee's NBU 921-35H1CS	API #4304751366	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)	A DI #400 4754007	IDO 40 00 Oct Delec Maritagle
Kerr-McGee's NBU 921-35H4BS	API #4304751367	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35H4CS	API #4304751368	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35I1BS API #43	304751369 IPC 10	0-100 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35I1CS	API #4304751370	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35I4BS API #43	304751371 IPC 10	0-100 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		· ·
Kerr-McGee's NBU 921-35I4CS	API #4304751372	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		3
Kerr-McGee's NBU 921-35J1CS	API #4304751373	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		ii e ie ee eperi alee meillemig
Kerr-McGee's NBU 921-35J4BS	API #4304751374	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s)	A 1 # 4304/3/3/4	ii o to toot dii t alco Monitoring
Kerr-McGee's NBU 921-35K4BS	API #4304751375	IPC 10-99 Spot Paleo Monitoring
	AFT#4304751375	IFC 10-99 Spot Faled Monitoring
(U-07-MQ-1437b,i,p,s) Kerr-McGee's NBU 921-35K4CS	API #4304751376	IPC 10-99 Spot Paleo Monitoring
	API #4304751376	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)	A DI #400 4754077	IDC 40 00 Coat Dalas Manitaria
Kerr-McGee's NBU 921-35N1BS	API #4304751377	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)	A DI #400 475 4070	IDO 40 00 0 4 D 1 14 15 1
Kerr-McGee's NBU 921-35N1CS	API #4304751378	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35E4CS	API #4304751379	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35P4CS	API #4304751380	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35P1CS	API #4304751381	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35P1BS	API #4304751382	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		Ç
Kerr-McGee's NBU 921-35O4CS	API #4304751383	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant		
Kerr-McGee's NBU 921-35O4BS	API #4304751384	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant		
Kerr-McGee's NBU 921-3501CS	API #4304751385	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant		
Kerr-McGee's NBU 921-35L1BS	API #4304751386	IPC 10-99 Spot Paleo Monitoring
1.5.7 MOSSOS 11DO 021 00E1DO	, i 100 TI 0 1000	2 10 00 opor i alco monitoring

(U-07-MQ-1437b,i,p,s)			
Kerr-McGee's NBU 921-35O1BS	API	#4304751387	IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant	site,	42Un1836, adjacen	t to pipeline)
Kerr-McGee's NBU 921-35N4CS	API	#4304751388	IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant	site,	42Un1836, adjacen	t to pipeline)
Kerr-McGee's NBU 921-35L1CS	API	#4304751389	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)			
Kerr-McGee's NBU 921-35L4CS	API	#4304751390	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)			
Kerr-McGee's NBU 921-35M1BS	API	#4304751391	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)			
Kerr-McGee's NBU 921-35M1CS	API	#4304751392	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)			
Kerr-McGee's NBU 921-35M4BS	API	#4304751393	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)			
Kerr-McGee's NBU 921-35M4CS	API	#4304751394	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)			
Kerr-McGee's NBU 921-35N4BS		#4304751395	IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant	site,	42Un1836, adiacen	t to pipeline)

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.

Well Name NBU 921-35H1BS

API Number 43047513650000 APD No 3198 Field/Unit NATURAL BUTTES

Location: 1/4,1/4 SENE **Sec** 35 **Tw** 9.0S **Rng** 21.0E 2143 FNL 486 FEL

GPS Coord (UTM) 627148 4427929 Surface Owner

Participants

See other comments:

Regional/Local Setting & Topography

The general area is within the Natural Buttes Unit in the lower portion of the Sand Wash Drainage of Uintah, County, approximately 37 air miles and 44.6 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads to the site. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs, furnishing water for antelope or livestock.

The NBU 921-35H pad will be created by significantly enlarging the existing pad of the CIGE 239 gas well. It will be enlarged in all directions. Four gas wells, to be directionally drilled, will be added. They are the NBU 921-35H4BS, NBU 921-35H1CS, NBU 921-35H1BS and MBU 921-35H4CS. The site is on the west slope of a hill in moderately gentle terrain. A swale exists to the northeast of the location. A drainage to the northwest is spilling a minor amount of sediment onto the location but a diversion is not warranted. A major tributary of Sand Wash is about 3/10 mile to the east of the site and the White River about 3 mile down drainage. The selected site appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the only site in the immediate area.

Both the surface and minerals are owned by SITLA.

Surface Use Plan

Current Surface Use

Grazing Wildlfe Habitat Existing Well Pad

New Road Miles Well Pad Src Const Material Surface Formation

0 Width 352 Length 455 Onsite UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

12/27/2010 Page 1

Vegetation is a poor desert shrub type, which includes rabbit brush, Indian ricegrass, black sage, stipa commata, greasewood, broom snakeweed, shadscale and halogeton.

Antelope, sheep during the winter, rabbits, coyotes, and small mammals, birds and raptors.

Soil Type and Characteristics

Surface soils are a shallow rocky sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

Paleo Survey Run? Y Paleo Potental Observed? N Cultural Survey Run? Y Cultural Resources?

Reserve Pit

Site-Specific Factors	Site Ranking				
Distance to Groundwater (feet)	100 to 200	5			
Distance to Surface Water (feet)	>1000	0			
Dist. Nearest Municipal Well (ft)	>5280	0			
Distance to Other Wells (feet)		20			
Native Soil Type	Mod permeability	10			
Fluid Type	Fresh Water	5			
Drill Cuttings	Normal Rock	0			
Annual Precipitation (inches)		0			
Affected Populations					
Presence Nearby Utility Conduits	Not Present	0			
	Final Score	40	1 Sensitivity Level		

Characteristics / Requirements

The proposed reserve pit is 120' x 260' x 12' deep located in a cut on the southwest corner of the location. Kerr McGee plans a 30-mil liner with a double felt sub-liner.

Closed Loop Mud Required? N Liner Required? Y Liner Thickness 30 Pit Underlayment Required? Y

Other Observations / Comments

Floyd Bartlett (DOGM), Sheila Wopsock, Clay Einerson, Lovell Young, Grizz Oleen, Charles Chase, Colby Sutton, Doyle Holmes, Claudia Sass, (Kerr McGee), Mitch Batty, John Slaugh, (Timberline Engineering and Land Surveying), Jim Davis (SITLA) and Ben Williams, (UDWR).

Floyd Bartlett 11/30/2010

Evaluator Date / Time

12/27/2010 Page 2

Application for Permit to Drill Statement of Basis

12/27/2010 Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner CBM
3198	43047513650000	LOCKED	GW	S No
Operator	KERR-MCGEE OIL & GAS O	NSHORE, L.P.	Surface Owner-APD	
Well Name	NBU 921-35H1BS		Unit	NATURAL BUTTES
Field	NATURAL BUTTES		Type of Work	DRILL
Location	SENE 35 9S 21E S 21	43 FNL 486 FEL	GPS Coord (UTM) 6	27163E 4427927N

Geologic Statement of Basis

Kerr McGee proposes to set 2,610' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 2,400'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of Section 35. The well is listed as 2,640 feet deep and used for drilling water. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect. Any usable ground water.

Brad Hill 12/20/2010 **APD Evaluator Date / Time**

Surface Statement of Basis

The general area is within the Natural Buttes Unit in the lower portion of the Sand Wash Drainage of Uintah, County, approximately 37 air miles and 44.6 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads to the site. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs, furnishing water for antelope or livestock.

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Both the surface and minerals are owned by SITLA. Jim Davis represented SITLA at the pre-site investigation. Mr. Davis had no concerns pertaining to this location excepted as covered above. SITLA provided a seed mix to be used when reclaiming the site.

Ben Williams represented the Utah Division of Wildlife Resources. Mr. Williams stated the area is classified as crucial yearlong antelope habitat but recommended no restrictions for this species. No other wildlife will be significantly affected.

Floyd Bartlett 11/30/2010
Onsite Evaluator Date / Time

12/27/2010

Application for Permit to Drill Statement of Basis

Utah Division of Oil, Gas and Mining

Page 2

Conditions of Approval / Application for Permit to Drill

Category Condition

Pits A synthetic liner with a minimum thickness of 30 mils with a double felt subliner shall be properly installed and

maintained in the reserve pit.

Surface The reserve pit shall be fenced upon completion of drilling operations.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/23/2010 **API NO. ASSIGNED:** 43047513650000

WELL NAME: NBU 921-35H1BS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: SENE 35 090S 210E **Permit Tech Review:**

> SURFACE: 2143 FNL 0486 FEL **Engineering Review:**

> **BOTTOM:** 1411 FNL 0494 FEL Geology Review:

COUNTY: UINTAH

LATITUDE: 39.99385 LONGITUDE: -109.51047

UTM SURF EASTINGS: 627163.00 NORTHINGS: 4427927.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: ML 22582 PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 3 - State COALBED METHANE: NO

RECEIVED AND/OR REVIEWED: LOCATION AND SITING:

✓ PLAT R649-2-3.

Unit: NATURAL BUTTES Bond: STATE/FEE - 22013542

Potash R649-3-2. General

Oil Shale 190-5

Oil Shale 190-3 R649-3-3. Exception

Drilling Unit Oil Shale 190-13

Board Cause No: Cause 173-14 Water Permit: Permit #43-8496

Effective Date: 12/2/1999 **RDCC Review:**

Siting: Suspends General Siting **Fee Surface Agreement**

✓ Intent to Commingle R649-3-11. Directional Drill

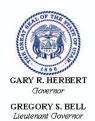
Commingling Approved

Comments: Presite Completed

Stipulations:

3 - Commingling - ddoucet 5 - Statement of Basis - bhill 15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason 25 - Surface Casing - hmacdonald

API Well No: 43047513650000



State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 921-35H1BS **API Well Number:** 43047513650000

Lease Number: ML 22582 **Surface Owner:** STATE **Approval Date:** 12/27/2010

Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:

In accordance with Board Cause No. 173-14 commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Surface casing shall be cemented to the surface.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

API Well No: 43047513650000

Additional Approvals:

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan contact Dustin Doucet
- Significant plug back of the well contact Dustin Doucet
- Plug and abandonment of the well contact Dustin Doucet

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well contact Carol Daniels OR
- submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at https://oilgas.ogm.utah.gov
- 24 hours prior to testing blowout prevention equipment contact Dan Jarvis
- 24 hours prior to cementing or testing casing contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well contact Dan Jarvis

Contact Information:

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 office
- Dustin Doucet 801-538-5281 office

801-733-0983 - after office hours

• Dan Jarvis 801-538-5338 - office

801-231-8956 - after office hours

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
- Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas

			Fanus
	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22582
SUNDF	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	sals to drill new wells, significantly deepen e igged wells, or to drill horizontal laterals. Us		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-35H1BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047513650000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	PHON treet, Suite 600, Denver, CO, 80217 3779	E NUMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2143 FNL 0486 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI	P, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
☐ NOTICE OF INTENT	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	☐ CHANGE WELL NAME
Approximate date work will start:	CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
☐ SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	□ PLUG BACK
	PRODUCTION START OR RESUME		
SPUD REPORT Date of Spud:		RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
8/17/2011	☐ REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
DRILLING REPORT	U TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
Report Date:	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:
MIRU PETE MARTIN RAN 14" 36.7# SCHE	MPLETED OPERATIONS. Clearly show all perting BUCKET RIG. DRILLED 20" CCEDULE 10 CONDUCTOR PIPE. CLOCATION ON AUGUST 17, 20	ONDUCTOR HOLE TO 40'. CMT W/ 28 SX READY MIX. 11 AT 12:30 HRS. COIL	· ·
NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst	
SIGNATURE N/A		DATE 8/18/2011	

Print Form

BLM - Vernal Field Office - Notification Form

Submitted By SHEILA WOPSOCI Phone Number 435.781.7024									
Well Name/Number NBU 921-35H1BS									
Qtr/Qtr SENE Section 35 Township 9S Range 21E									
Lease Serial Number ML-22582									
API	Number <u>4304751367.5</u>								
	<u>d Notice</u> – Spud is the initia below a casing string.	l spudding (of the we	ell, not drilling					
	Date/Time <u>08/17/2011</u>	1000 HRS	AM ✓	РМ					
<u>Casing</u> – Please report time casing run starts, not cementing									
time	Surface Casing			RECEIVED					
	Intermediate Casing			AUG 1 6 2011					
	Production Casing Liner		2	DIV. OF OIL, GAS & MINING					
	Other								
	Date/Time <u>09/06/2011</u>	0800 HRS	AM 🔽	РМ					
<u>BOP</u>	<u>E</u>								
	Initial BOPE test at surface								
	BOPE test at intermediate 30 day BOPE test	casing poin	L						
	Other								
	Date/Time		AM 🗌	РМ					
Rem	Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT LOVEL YOUNG AT 435.781.7051 FOR MORE								

STATE OF UTAH			FORM 9	
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING			5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22582	
SUNDRY NOTICES AND REPORTS ON WELLS			6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.			7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-35H1BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.			9. API NUMBER: 43047513650000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 720 929-6515 Ext			9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2143 FNL 0486 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENE Section: 35 Township: 09.0S Range: 21.0E Meridian: S			COUNTY: UINTAH	
			STATE: UTAH	
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA				
TYPE OF SUBMISSION	TYPE OF ACTION			
_	ACIDIZE	☐ ALTER CASING	CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	CHANGE WELL NAME	
8/30/2011	☐ CHANGE WELL STATUS	\square commingle producing formations	☐ CONVERT WELL TYPE	
SUBSEQUENT REPORT	✓ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION	
Date of Work Completion:	OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK	
	☐ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION	
SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON	
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL	
DRILLING REPORT	☐ WATER SHUTOFF	\square SI TA STATUS EXTENSION	☐ APD EXTENSION	
Report Date:	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. The operator requests authorization to deepen this well to the Blackhawk formation which resides in the Mesaverde formation. Attached is the proposed drilling program. All other information remains the same as documented in the originally approved Application for Permit to Drill. Approved by the Utah Division of Oil, Gas and Mining				
		D	ate: 08/29/2011	
		В	y: Bally	
			29	
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE Regulatory Analyst		
Andy Lytle	720 929-6100	Regulatory Analyst		
SIGNATURE N/A		DATE 8/29/2011		

NBU 921-35H Pad Drilling Program 1 of 8

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 921-35H1BS

Surface: 2143 FNL / 486 FEL SENE BHL: 1411 FNL / 494 FEL SENE

Section 35 T9S R21E

Unitah County, Utah Mineral Lease: ST UT ML 22582

ONSHORE ORDER NO. 1

DRILLING PROGRAM

Estimated Tops of Important Geologic Markers: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1459	
Birds Nest	1785	Water
Mahogany	2160	Water
Wasatch	4748	Gas
Mesaverde	7449	Gas
MVU2	8362	Gas
MVL1	8946	Gas
Sego	9685	Gas
Castlegate	9738	Gas
MN5	10153	Gas
TVD	10753	
TD	10850	

3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program

4. <u>Proposed Casing & Cementing Program:</u>

Please refer to the attached Drilling Program

5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program

NBU 921-35H Pad Drilling Program 2 of 8

6. Evaluation Program:

Please refer to the attached Drilling Program

7. <u>Abnormal Conditions</u>:

Maximum anticipated bottom hole pressure calculated at 10753' TVD, approximately equals 7,146 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,780 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. <u>Variances:</u>

Please refer to the attached Drilling Program. Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- · Blowout Prevention Equipment (BOPE) requirements;
- · Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

NBU 921-35H Pad Drilling Program
3 of 8

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KM0 well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

NBU 921-35H Pad Drilling Program 4 of 8

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the bloom line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. <u>Other Information:</u>

Please refer to the attached Drilling Program.

Sundry Number: 17913 API Well Number: 43047513650000

NBU 921-35H Pad

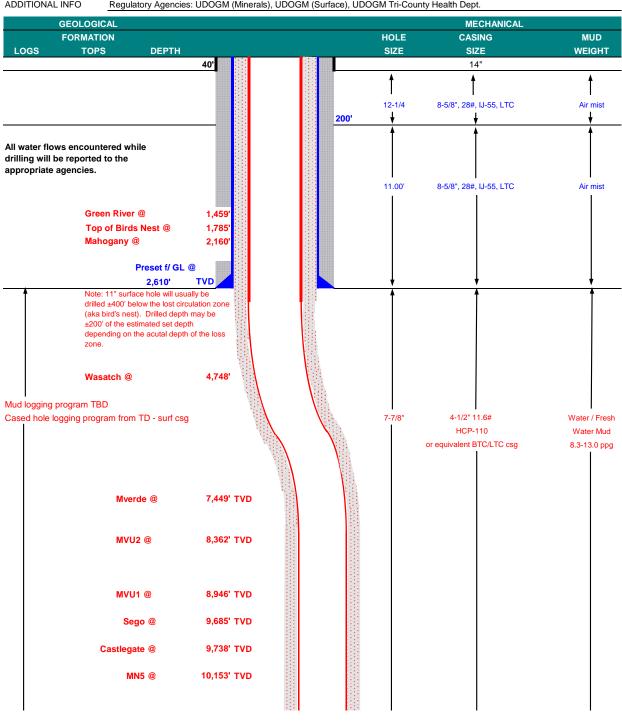
Drilling Program

5 of 8



KERR-McGEE OIL & GAS ONSHORE LP <u>DRILLING PROGRAM</u>

COMPANY NAME KEI	RR-McGEE C	IL & GAS ONSH	HORE LP		DATE	August 29	, 2011		
WELL NAME NE	U 921-35H	H1BS			TD	10,753'	TVD	10,850' MD	
FIELD Natural Butte	es	COUNTY	Uintah S	STATE Uta	h	FINIS	SHED ELEVATION	5,098'	
SURFACE LOCATION	SENE	2143 FNL	486 FEL	Sec 35	T 9S	R 21E			
	Latitude:	39.993902	Longitude	e: -109.51	0523		NAD 27	· _	
BTM HOLE LOCATION	SENE	1411 FNL	494 FEL	Sec 35	T 9S	R 21E		· _	
	Latitude:	39.995911	Longitude	e: -109.51	0555		NAD 27	· _	
OBJECTIVE ZONE(S)	Wasatch/N	/lesaverde							
ADDITIONAL INFO	Regulatory	Agencies: UDO	GM (Minerals)	UDOGM (Surface)	UDOGM Tri-C	ounty Health Dept		



Sundry Number: 17913 API Well Number: 43047513650000

NBU 9	21-35H Pad			 		. Dri	lling Program
	Max anticipated						6 of 8
	Mud required		10,753' TVD	**			
	13.0 ppg	TD @	10,850' MD	 	\	↓ .	Į.

Sundry Number: 17913 API Well Number: 43047513650000

Drilling Program NBU 921-35H Pad 7 of 8



KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

DESIGN FACTORS CASING PROGRAM втс COLLAPSE SIZE **INTERVAL** GR. CPLG. **BURST TENSION** CONDUCTOR 14" 0-40' 3,390 1,880 348,000 N/A 8-5/8" 28.00 IJ-55 **SURFACE** 1.54 0 2,610 LTC N/A to 2 07 5.44 8,650 367,000 10,690 279,000 HCP-110 **PRODUCTION** 4-1/2" 0 to 10,850 11.60 LTC or BTC 1.19 2.77 3.64 1.19

Surface Casing:

0.73 psi/ft = frac gradient @ surface shoe (Burst Assumptions: TD = 13.0 ppg)

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

0.66 psi/ft = bottomhole gradient (Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi)

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
		+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water	to surface, o	ption 2 will I	oe utilized	
Option 2 LEAD	2,110'	65/35 Poz + 6% Gel + 10 pps gilsonite	190	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOW				
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION LEAD	4,240'	Premium Lite II +0.25 pps	320	20%	11.00	3.38
		celloflake + 5 pps gilsonite + 10% gel				
		+ 0.5% extender				
TAIL	6,610'	50/50 Poz/G + 10% salt + 2% gel	1,560	35%	14.30	1.31
		+ 0.1% R-3				

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe				
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.				

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5.000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

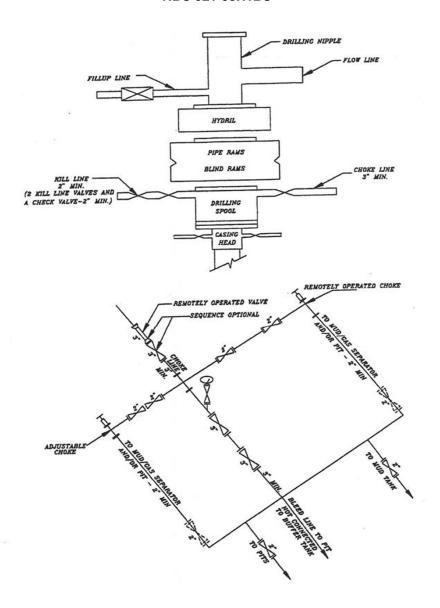
Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:		DATE:	
	Nick Spence / Danny Showers	•	
DRILLING SUPERINTENDENT:		DATE:	
	Kenny Gathings / Lovel Young	•	

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

NBU 921-35H Pad Drilling Program **EXHIBIT A** 8 of 8

EXHIBIT A NBU 921-35H1BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM				
KERR McGEE OIL & GAS ONSHORE LP	Operator Account Number: N 2995			
P.O. Box 173779	Operator Account Number. 14			
city DENVER				

Phone Number: (720) 929-6100

Well 1

Operator:

Address:

state CO

API Number	Well	Well Name QQ Sec		QQ Sec Twp		Rng	County
4304751368	NBU 921-	35H4CS	SENE	35	98	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	3900	8	3/17/201	1	9	129/11

zip 80217

Well 2

API Number	Well Name		QQ	QQ Sec Twp		Rng	County
4304751365	NBU 921-35H1BS		SENE	SENE 35 9S		21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment		
\mathcal{B}	99999	3900	8	3/17/201	1	8/	29/11

Well 3

S 21E		
	<u> </u>	
	Entity Assignment Effective Date	
	8/29/11	
	ENE	

ACTION CODES:

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section)

RECEIVED

AUG 2 2 2011

ANDY LYTLE	
Name (Please Print)	
Signature REGULATORY ANALYST	8/22/2011
Title	Date

Sundry Number: 18112 API Well Number: 43047513650000

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22582
SUNDF	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	sals to drill new wells, significantly deepen e igged wells, or to drill horizontal laterals. Us		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-35H1BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047513650000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	PHON treet, Suite 600, Denver, CO, 80217 3779	TE NUMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2143 FNL 0486 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI	IP, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICATE	E NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
MIRU AIR RIG ON AU SURFACE CASING	□ ACIDIZE □ CHANGE TO PREVIOUS PLANS □ CHANGE WELL STATUS □ DEEPEN □ OPERATOR CHANGE □ PRODUCTION START OR RESUME □ REPERFORATE CURRENT FORMATION □ TUBING REPAIR □ WATER SHUTOFF □ WILDCAT WELL DETERMINATION OMPLETED OPERATIONS. Clearly show all perticulation of the second of the	FACE HOLE TO 2740'. RAN ITING ON ROTARY RIG. ITH WELL COMPLETION A U	N
NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst	
SIGNATURE N/A		DATE 9/2/2011	

Sundry Number: 18848 API Well Number: 43047513650000

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	G	5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22582
SUNDI	RY NOTICES AND REPORTS O	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for propo bottom-hole depth, reenter plu DRILL form for such proposals	sals to drill new wells, significantly deepen exi- ugged wells, or to drill horizontal laterals. Use a 	sting wells below current APPLICATION FOR PERMIT TO	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-35H1BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047513650000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	PHONE I Street, Suite 600, Denver, CO, 80217 3779	NUMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2143 FNL 0486 FEL	COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENE Section: 35 Township: 09.0S Range: 21.0E Meridian: S			STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICATE I	NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	☐ ACIDIZE ☐	ALTER CASING	☐ CASING REPAIR
Approximate date work will start:	☐ CHANGE TO PREVIOUS PLANS ☐	CHANGE TUBING	☐ CHANGE WELL NAME
10/3/2011	☐ CHANGE WELL STATUS ☐	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN ☐	FRACTURE TREAT	☐ NEW CONSTRUCTION
Date of Work Completion.	☐ OPERATOR CHANGE ☐	PLUG AND ABANDON	☐ PLUG BACK
SPUD REPORT	☐ PRODUCTION START OR RESUME ☐	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	☐ REPERFORATE CURRENT FORMATION ☐	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	☐ TUBING REPAIR ☐	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	□ WATER SHUTOFF □	SI TA STATUS EXTENSION	APD EXTENSION
inceport Parter	☐ WILDCAT WELL DETERMINATION ✓	OTHER	OTHER: Pit Refurb/ ACTS
	OMPLETED OPERATIONS. Clearly show all pertine		olumes, etc.
	as Onshore, LP is requesting to r or completion operations. The ref		r
	the COA of the APD. Upon compl		
	ilso requesting to utilize this pit a		Utah Division of
	completion operations in the are		
	nks before the water is placed in		10/05/2011
	anks is to collect any hydro-carb other completion operations befo		ate:
	pit open for 1 year. During this t		
	on fluids will be recycled in this p		
	sections.	Thank you.	
NAME (DI FACE POTAT)	BUONE WINDER	TITLE	
NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst	
SIGNATURE		DATE 9/26/2011	

Sundry Number: 18848 API Well Number: 43047513650000



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Sundry Conditions of Approval Well Number 43047513650000

A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the pit.

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22582
SUNDF	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
Do not use this form for propo- bottom-hole depth, reenter plu DRILL form for such proposals.	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-35H1BS		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS		9. API NUMBER: 43047513650000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	PHOI treet, Suite 600, Denver, CO, 80217 3779	NE NUMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2143 FNL 0486 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI	I P, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	☐ CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	✓ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
11/7/2011	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
Julio di opuni	TUBING REPAIR	□ VENT OR FLARE	□ WATER DISPOSAL
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Date:	□ WILDCAT WELL DETERMINATION	OTHER	OTHER:
The operator reques the Operator reques and a production cas drilling plan will not submitted and	STATES OPERATIONS. Clearly show all persons approval for changes in the sts approval for a FIT waiver, of sing change. All other aspects change. These proposals do no approved plans. Please see attempted to the state of the st	drilling plan. Specifically, closed loop drilling option, of the previously approved ot deviate from previously cachments. Thank you.	d
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulartory Analyst	
SIGNATURE N/A		DATE 11/7/2011	

NBU 921-35H1BS Drilling Program
1 of 7

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 921-35H1BS

Surface: 2143 FNL / 486 FEL SENE BHL: 1411 FNL / 494 FEL SENE

Section 35 T9S R21E

Unitah County, Utah Mineral Lease: ST UT ML 22582

ONSHORE ORDER NO. 1

DRILLING PROGRAM

Estimated Tops of Important Geologic Markers: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,459'	
Birds Nest	1,785'	Water
Mahogany	2,160'	Water
Wasatch	4,748'	Gas
Mesaverde	7,449'	Gas
MVU2	8,362'	Gas
MVL1	8,946'	Gas
Sego	9,685'	Gas
Castlegate	9,738'	Gas
MN5	10,153'	Gas
TVD	10,753'	
TD	10,850'	

3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program

4. <u>Proposed Casing & Cementing Program:</u>

Please refer to the attached Drilling Program

5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program

NBU 921-35H1BS Drilling Program
2 of 7

6. <u>Evaluation Program</u>:

Please refer to the attached Drilling Program

7. <u>Abnormal Conditions</u>:

Maximum anticipated bottom hole pressure calculated at 10753' TVD, approximately equals 7,097 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,780 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. <u>Anticipated Starting Dates:</u>

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Drilling Program. Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- · Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

NBU 921-35H1BS Drilling Program 3 of 7

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KM well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

NBU 921-35H1BS Drilling Program 4 of 7

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. <u>Other Information:</u>

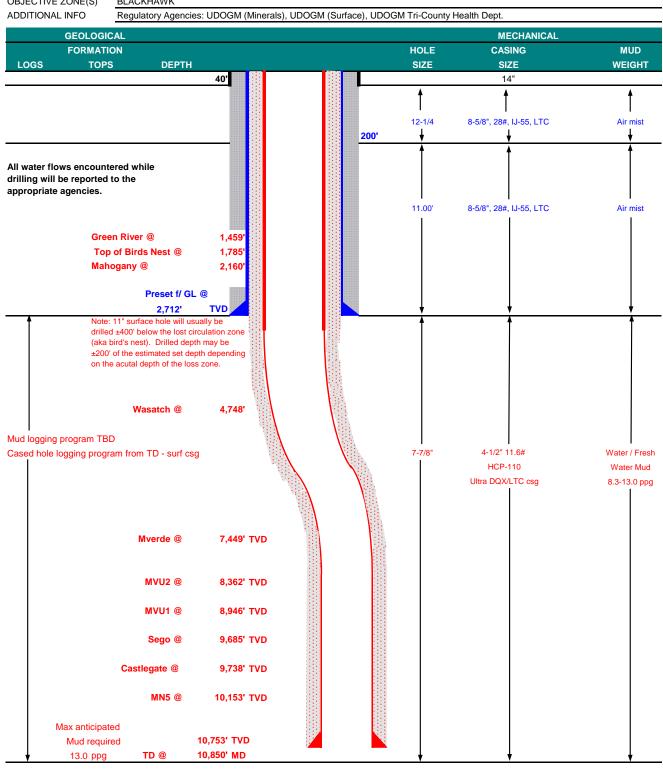
Please refer to the attached Drilling Program.

NBU 921-35H1BS Drilling Program
5 of 7



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP DATE November 7, 2011 **NBU 921-35H1BS** 10,753' WELL NAME TD TVD 10,850' MD **FIELD** Natural Buttes COUNTY Uintah STATE Utah FINISHED ELEVATION 5,098' SURFACE LOCATION SENE 2143 FNL 486 FEL Sec 35 T 9S R 21E -109.510523 NAD 27 Latitude: 39.993902 Longitude: BTM HOLE LOCATION SENE 1411 FNL 494 FEL Sec 35 T 9S R 21E -109.510555 NAD 27 Latitude: 39.995911 Longitude: OBJECTIVE ZONE(S) **BLACKHAWK**



NBU 921-35H1BS Drilling Program

6 of 7



KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM					DESIGN FACTORS						
										LTC	DQX
	SIZE	INT	ERVA		WT.	GR.	CPLG.	BURST	COLLAPSE	TE	NSION
CONDUCTOR	14"	()-40'								
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,712	28.00	IJ-55	LTC	1.98	1.48	5.23	N/A
								10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0	to	5,000	11.60	HCP-110	DQX	1.19	1.19		3.64
	4-1/2"	5,000	to	10,850'	11.60	HCP-110	LTC	1.19	1.19	5.13	

Surface Casing:

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGH	Т	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1			+ 0.25 pps flocele					
TOP OUT CMT (6	jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
			+ 2% CaCl + 0.25 pps flocele					
SURFACE			NOTE: If well will circulate water	to surface, op	tion 2 will b	e utilized		
Option 2	LEAD	2,212'	65/35 Poz + 6% Gel + 10 pps gilsonite	200	35%	11.00		3.82
			+ 0.25 pps Flocele + 3% salt BWOW					
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
			+ 0.25 pps flocele					
TOP OUT	СМТ	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	4,240'	Premium Lite II +0.25 pps	320	20%	11.00		3.38
			celloflake + 5 pps gilsonite + 10% gel					
			+ 0.5% extender					
	TAIL	6,610'	50/50 Poz/G + 10% salt + 2% gel	1,560	35%	14.30		1.31
			+ 0.1% R-3					

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

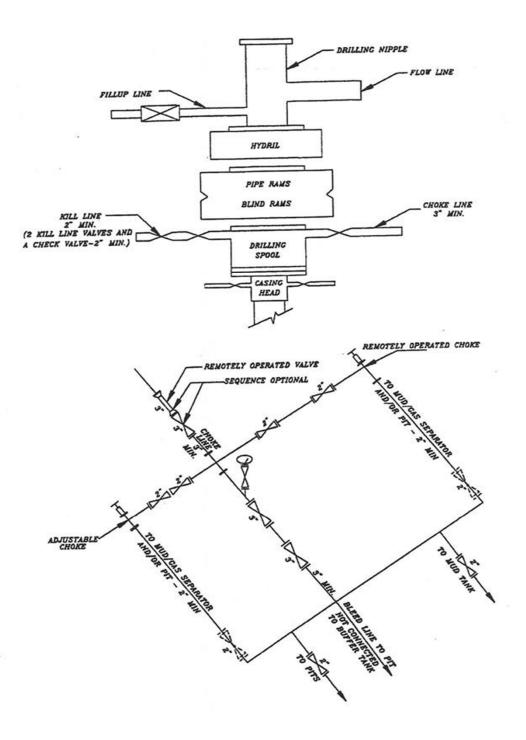
Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:		DATE:	
	Nick Spence / Danny Showers / Chad Loesel	•	
DRILLING SUPERINTENDENT:		DATE:	
	Kenny Gathings / Lovel Young	·	

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

NBU 921-35H4CS Drilling Program 7 of 7

EXHIBIT A NBU 921-35H1BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

	STATE OF UTAH		FORM 9
I	5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22582		
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-35H1BS		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	9. API NUMBER: 43047513650000		
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	9. FIELD and POOL or WILDCAT:		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2143 FNL 0486 FEL		COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 5 Township: 09.0S Range: 21.0E Meridi	an: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start:	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
Date of Work Completion.	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	L TEMPORARY ABANDON
✓ DRILLING REPORT	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
1/9/2012	WILDCAT WELL DETERMINATION	OTHER	OTHER:
MIRU ROTARY RIG. 7, 2012. RAN 4-1/2 PRODUCTION CASIN HRS. DETAILS OF	COMPLETED OPERATIONS. Clearly show a FINISHED DRILLING FROM 2 " 11.6# P-110 PRODUCTION NG. RELEASED H&P RIG 298 CEMENT JOB WILL BE INCLU EPORT. WELL IS WAITING ON ACTIVITIES.	740' TO 10,880' ON JAN. CASING. CEMENTED ON JAN. 9, 2012 @ 23:59 DED WITH THE WELL	Accepted by the Utah Division of
NAME (PLEASE PRINT)	PHONE NUMB		
Jaime Scharnowske	720 929-6304	Regulartory Analyst	
SIGNATURE N/A		DATE 1/10/2012	

Sundry Number: 23995 API Well Number: 43047513650000

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURG DIVISION OF OIL, GAS, AND MII		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22582
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-35H1BS		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	9. API NUMBER: 43047513650000		
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2143 FNL 0486 FEL	COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SENE Section: 3	STATE: UTAH		
11. CHECI	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
3/16/2012	WILDCAT WELL DETERMINATION	OTHER	OTHER:
THE SUBJECT WEL 1345 HRS. THE CH	COMPLETED OPERATIONS. Clearly show L WAS PLACED ON PRODUC RONOLOGICAL WELL HISTOF TH THE WELL COMPLETION R	CTION ON 03/16/2012 AT RY WILL BE SUBMITTED	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 19, 2012
NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUME 435 781-7024	BER TITLE Regulatory Analyst	
SIGNATURE		DATE	
N/A		3/19/2012	

	STATE OF UTAH		FORM 9		
ī	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	G	5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22582		
	I WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
current bottom-hole depth, i	Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.				
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-35H1BS				
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	9. API NUMBER: 43047513650000				
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	ONE NUMBER: 79 720 929-6	9. FIELD and POOL or WILDCAT: 100ATURAL BUTTES			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2143 FNL 0486 FEL	COUNTY: UINTAH				
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SENE Section: 3	IIP, RANGE, MERIDIAN: 5 Township: 09.0S Range: 21.0E Meridian:	S	STATE: UTAH		
11. CHECI	K APPROPRIATE BOXES TO INDICATE I	NATURE OF NOTICE, REPOR	T, OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
7	ACIDIZE	ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
4/24/2014	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION		
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	✓ RECOMPLETE DIFFERENT FORMATION		
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL		
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
Report Date:	WILDCAT WELL DETERMINATION	OTHER	OTHER:		
12. DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly show all p	ertinent details including dates, d	epths, volumes, etc.		
The operator wish	les to recomplete the reference ease see the attached procedu	ed well in a different	Approved by the Utah Division of Oil, Gas and Mining		
			Date: May 01, 2014		
			By: Dark Court		
NAME (PLEASE PRINT) Matthew P Wold	PHONE NUMBER 720 929-6993	TITLE Regulatory Analyst I			
SIGNATURE N/A		DATE 4/24/2014			



Greater Natural Buttes Unit

NBU 921-35H1BS
RE-COMPLETIONS PROCEDURE
NBU 921-35H PAD
FIELD ID: BLUE WELL

DATE: 4/15/2014

AFE#:

API#: 4304751365

USER ID: SNT239 (Frac Invoices Only)

COMPLETIONS ENGINEER: Jamie Berghorn, Denver, CO

(720) 929-6230 (Office) (303) 909-3417 (Cell)

REMEMBER SAFETY FIRST!

Name: NBU 921-35H1BS

Location: NW NE SE NE Sec 35 T9S R21E

LAT: 39.993867 **LONG:** -109.511210 **COORDINATE:** NAD83 (Surface Location)

Uintah County, UT

ELEVATIONS: 5,098' GL 5,124' KB *Frac Registry TVD: 10,785*'

TOTAL DEPTH: 10.880' **PBTD:** 10.819'

SURFACE CASING: 8 5/8", 28# J-55 LTC @ 2,734' **PRODUCTION CASING:** 4 1/2", 11.6#, P-110 DQX @ 5,241'
4 1/2", 11.6#, P-110 LTC @ 10,864'

Marker Joint 5,227-5,248 & 7,530-7,551 & 10,260-10,280'

TUBULAR PROPERTIES:

	BURST	COLLAPSE	DRIFT DIA.	CAPACIT	IES
	(psi)	(psi)	(in.)	(bbl./ft)	(gal/ft)
2 3/8" 4.7# L-80 tbg	11,200	11,780	1.901"	0.00387	0.1624
4 ½" 11.6# I-80 (See above)	7780	6350	3.875"	0.0155	0.6528
4 ½" 11.6# P-110	10691	7580	3.875"	0.0155	0.6528
2 3/8" by 4 ½" Annulus				0.0101	0.4227

TOPS: BOTTOMS:

1,579' Green River Top

1,787' Bird's Nest Top

2,370' Mahogany Top

4,871' Wasatch Top 7,557' Wasatch Bottom 7,557' Mesaverde Top 10,880' Mesaverde Bottom (TD)

T.O.C. @ 2292'

GENERAL NOTES:

- Please note that:
 - All stages on this procedure may or may not be completed due to low frac gradients, timing, or other possible reasons. Total stages completed can be found in the post-job-report.
 - O CBP depth on this procedure is only to be used as a reference. This depth is subject to change as per field operations and the discretion of the wireline supervisor and field foreman.
- A minimum of **34** tanks (cleaned lined 500 bbl) of recycled water will be required. Note: Use biocide in tanks and the water needs to be at least 45°F at pump time.
- All perforation depths are from Schlumberger's GRlog dated 2/17/2012.
- 13 fracturing stages required for coverage.
- Hydraulic isolation estimated at **2440'** based upon Schlumberger's CBL dated 2/17/2012.
- Procedure calls for 14 CBP's (8000 psi).
- Calculate open perforations after each breakdown. If less than 60% of the perforations appear to be open, ball out with 15% HCl.
- Pump scale inhibitor at 0.5 gpt. Remember to pre-load the casing with scale inhibitor.

^{*}Based on latest geological interpretation

^{**}Based on latest interpretation of CBL

- FR will be pumped at 0.3 gpt for this well. This concentration will be raised or lowered on the job at the discretion of the APC foreman per the well's treating pressure.
- 30/50 mesh Ottawa sand, Slickwater frac.
- Maximum surface pressure 6200 psi.
- If casing pressure test fails (pressure loss of 1.5% psi or more), retest for 15 minutes. If pressure loss of 1.5% more on second test, notify Denver engineers. Record in Openwells. MIRU with tubing and packer. Isolate leak by pressure testing above and below the packer. RIH and set appropriate casing leak remediation. Re-pressure test to 1000 and 3500 psi for 15 minutes each and to 6200 psi for 30 minutes (specific details on remediation should be documented in OpenWells).
- Flush volumes are the sum of slick water and acid used during displacement (include scale inhibitor as mentioned above). Stage acid and scale inhibitor if necessary to cover the next perforated interval.
- Call flush at 0 PPG @ inline densiometers. Slow to 5 bbl/min over last 10-20 bbls of flush. Flush to top perf.
- Max Sand Concentration: Mesaverde 1 ppg; Wasatch 2 ppg;
- If distance between plug and top perf of previous stage is less than 50', it is considered to be tight spacing design will over flush stage by 5 bbls (from top perf)
- TIGHT SPACING ON STAGE 1-3, 5, 7-9, 11
- If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work

Existing Perforations:

Formation	Zone	Top	Btm	spf	Shots	Date	Reason
MESAVERDE	BLACKHAWK	10354	10356	4	8		PRODUCTION
MESAVERDE	BLACKHAWK	10368	10372	4	16		PRODUCTION
MESAVERDE	BLACKHAWK	10397	10398	3	3		PRODUCTION
MESAVERDE	BLACKHAWK	10407	10410	3	9		PRODUCTION
MESAVERDE	BLACKHAWK	10416	10418	3	6		PRODUCTION
MESAVERDE	BLACKHAWK	10444	10446	3	6		PRODUCTION
MESAVERDE	BLACKHAWK	10514	10518	4	16		PRODUCTION
MESAVERDE	BLACKHAWK	10734	10736	4	8		PRODUCTION

Relevant History:

03/05/2012: Originally completed in Blackhawk formation (3 stages) with ~ 326734 gallons of Slickwater, 180508 lbs of 30/50 TLC.

10/08/2013: Last slickline report:

Traveled to location rigged up ran jdc found heavy fluid @ 900 drift down to 10345 came out with a viper plunger ran jdc set down @ 10345 jarred on spring for a while came out with a stainless steal spring ran td set down @ 10798 came out ran scratcher out the tubing came out ran 1.9 broach set down @ 10345 came out tubing was clean there was trace of sand on the broach spring and plunger looks good left stainless steal spring and viper plunger out well was logged off and selling of the back side rigged down traveled to the next location

03/16/2012: Tubing Currently Landed @~10358'

H2S History:

Location Name	WINS No. (wel	Production Date	Gas (avg mcfl	Water (avg bb	Oil (avg bbl/day)	Avg. BOE/day	LGR (bbl/Mmcf)	Max H2S Sep.	Separator H2.	Tank H2S (lbs)
NBU 921-35H1BS	E3155	3/31/2012	269.61	0.00	0.00	44.94	0.00			
NBU 921-35H1BS	E3155	4/30/2012	310.27	0.00	0.00	51.71	0.00	0.00	0.00	0.00
NBU 921-35H1BS	E3155	5/31/2012	225.32	0.00	0.00	37.55	0.00	0.00	0.00	0.00
NBU 921-35H1BS	E3155	6/30/2012	191.87	0.00	0.00	31.98	0.00			
NBU 921-35H1BS	E3155	7/31/2012	148.68	0.00	0.00	24.78	0.00			
NBU 921-35H1BS	E3155	8/31/2012	116.00	0.00	0.00	19.33	0.00			
NBU 921-35H1BS	E3155	9/30/2012	113.10	0.00	0.00	18.85	0.00			
NBU 921-35H1BS	E3155	10/31/2012	103.48	0.00	0.00	17.25	0.00			
NBU 921-35H1BS	E3155	11/30/2012	96.77	0.00	0.00	16.13	0.00			
NBU 921-35H1BS	E3155	12/31/2012	44.45	0.00	0.00	7.41	0.00			
NBU 921-35H1BS	E3155	1/31/2013	17.13	0.00	0.00	2.85	0.00			
NBU 921-35H1BS	E3155	2/28/2013	9.32	0.00	0.00	1.55	0.00			
NBU 921-35H1BS	E3155	3/31/2013	9.74	0.00	0.00	1.62	0.00			
NBU 921-35H1BS	E3155	4/30/2013	5.90	0.00	0.00	0.98	0.00			
NBU 921-35H1BS	E3155	5/31/2013	5.48	0.00	0.00	0.91	0.00	0.00	0.00	0.00
NBU 921-35H1BS	E3155	6/30/2013	7.90	0.00	0.00	1.32	0.00			
NBU 921-35H1BS	E3155	7/31/2013	3.94	0.00	0.00	0.66	0.00			
NBU 921-35H1BS	E3155	8/31/2013	3.84	0.00	0.00	0.64	0.00			
NBU 921-35H1BS	E3155	9/30/2013	3.50	0.00	0.00	0.58	0.00			
NBU 921-35H1BS	E3155	10/31/2013	3.55	0.00	0.00	0.59	0.00			
NBU 921-35H1BS	E3155	11/30/2013	6.83	0.00	0.00	1.14	0.00			
NBU 921-35H1BS	E3155	12/31/2013	1.35	0.00	0.00	0.23	0.00			
NBU 921-35H1BS	E3155	1/31/2014	1.94	0.00	0.00	0.32	0.00			
NBU 921-35H1BS	E3155	2/28/2014	6.36	0.00	0.00	1.06	0.00			
NBU 921-35H1BS	E3155	3/31/2014	5.77	0.00	0.00	0.96	0.00			

<u>PROCEDURE</u>: (If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work.)

- 1. MIRU. Control well with recycled water and biocide as required. ND WH, NU BOP's and test.
- 2. The tubing is below the proposed CBP depth. TOOH with 2-3/8", 4.7#, L-80 tubing. Visually inspect for scale and consider replacing if needed.
- 3. If the looks ok consider running a gauge ring to 9660' (50' below proposed CBP). Otherwise P/U a mill and C/O to 9660' (50' below proposed CBP).
- 4. Set 8000 psi CBP at ~ 9610'. ND BOPs and NU frac valves Test frac valves and casing to to 6200 psi for 15 minutes; if pressure test fails contact Denver engineer and see notes above. Lock OPEN the Braden head valve. Flow from annulus will be visually monitored throughout stimulation. If release occurs, stimulation will be shut down. Well conditions will be assessed and actions taken as necessary to secure the well. UDOGM will be notified if a release to the annulus occurs.
- 5. Pressure test frac lines to max surface pressure + 1000 psi for 15 minutes. Pressure loss should be less than 10% to be considered acceptable. Check and correct for existing leaks.
- 6. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	10	spī	# of shots
MESAVERDE	9403	9404	3	3
MESAVERDE	9464	9465	3	3
MESAVERDE	9500	9501	3	3
MESAVERDE	9528	9529	3	3
MESAVERDE	9544	9546	3	6
MESAVERDE	9578	9580	3	6

7. Breakdown perfs and establish injection rate (<u>include scale inhibitor in fluid</u>). Spot 250 gals of 15% HCL and let soak 5-10 min. Fracture as outlined in Stage 1 on attached listing. Under-displace to ~9403' and trickle 250gal 15% HCL w/ scale inhibitor in flush . **NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS**

8. Set 8000 psi CBP at ~9385'. Perf the following 3-1/8" gun, 19 gm, 0.40" hole:

```
Zone
            From
                        spf
                             # of shots
                   To
MESAVERDE 9108
                  9109
                               3
                         3
                               3
MESAVERDE 9123
                  9124
                        3
                  9154
                        3
                               3
MESAVERDE 9153
MESAVERDE 9172
                  9173
                        3
                               3
MESAVERDE 9296
                  9297
                         3
                               3
MESAVERDE 9304
                  9305
                        3
                               3
                               3
MESAVERDE 9328
                  9329
                        3
MESAVERDE 9354
                  9355
                         3
                               3
```

- 9. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 2 on attached listing. Under-displace to ~9108' and trickle 250gal 15%HCL w/ scale inhibitor in flush. NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS
- 10. Set 8000 psi CBP at ~9095'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

```
# of shots
Zone
            From
                   To
                        spf
MESAVERDE 8873
                  8874
                         3
                               3
                               3
MESAVERDE 8906
                  8907
                         3
MESAVERDE 8930
                         3
                               3
                  8931
MESAVERDE 8957
                  8958
                         3
                               3
MESAVERDE 8972
                  8973
                         3
                               3
                               3
MESAVERDE 9001
                  9002
                         3
MESAVERDE 9041
                  9042
                         3
                               3
                         3
                               3
MESAVERDE 9081
                  9082
```

- 11. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 3 on attached listing. Under-displace to ~8873' and trickle 250gal 15% HCL w/ scale inhibitor in flush. NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS
- 12. Set 8000 psi CBP at ~8830'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

```
Zone
            From
                        spf
                              # of shots
                   To
MESAVERDE 8646
                  8647
                               3
                         3
MESAVERDE 8751
                  8752
                        3
                               3
MESAVERDE 8764
                  8765
                        3
                               3
MESAVERDE 8778
                  8779
                         3
                               3
MESAVERDE 8788
                         3
                               3
                  8789
                         3
MESAVERDE 8798
                  8800
```

- 13. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 4 on attached listing. Under-displace to ~8646' and trickle 250gal 15% HCL w/ scale inhibitor in flush.
- 14. Set 8000 psi CBP at ~8596'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
MESAVERI	DE 8386	8387	3	3
MESAVERI	DE 8417	8418	3	3

```
MESAVERDE 8432
                 8433
MESAVERDE 8475
                 8476
                      3
                             3
MESAVERDE 8513
                 8514
                       3
                             3
MESAVERDE 8548
                 8549
                       3
                             3
                       3
                             3
MESAVERDE 8560
                 8561
MESAVERDE 8567
                       3
                             3
                 8568
```

15. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 5 on attached listing. Under-displace to ~8386' and trickle 250gal 15% HCL w/ scale inhibitor in flush. NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS

16. Set 8000 psi CBP at ~8374'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	То	spf	# of shots
MESAVERDE	8209	8210	3	3
MESAVERDE	8264	8265	3	3
MESAVERDE	8291	8292	3	3
MESAVERDE	8302	8303	3	3
MESAVERDE	8315	8317	3	6
MESAVERDE	8342	8344	3	6

- 17. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 6 on attached listing. Under-displace to ~8209' and trickle 250gal 15% HCL w/ scale inhibitor in flush.
- 18. Set 8000 psi CBP at ~8159'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

```
Zone
           From
                  To
                       spf
                             # of shots
                  7997
MESAVERDE 7996
                        3
                              3
MESAVERDE 8018
                  8019
                       3
                              3
                              3
MESAVERDE 8078
                  8079
MESAVERDE 8103
                              3
                  8104
                        3
                        3
MESAVERDE 8126
                  8128
                              6
MESAVERDE 8136
                 8138
                              6
```

- 19. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 7 on attached listing. Under-displace to ~7996' and trickle 250gal 15% HCL w/ scale inhibitor in flush. NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS
- 20. Set 8000 psi CBP at ~7986'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
MESAVERDE	7784	7785	3	3
MESAVERDE	7807	7808	3	3
MESAVERDE	7821	7822	3	3
MESAVERDE	7855	7856	3	3
MESAVERDE	7900	7901	3	3
MESAVERDE	7913	7914	3	3
MESAVERDE	7943	7944	3	3
MESAVERDE	7962	7963	3	3

21. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 8 on attached listing. Under-displace to ~7784' and trickle 250gal 15%HCL w/ scale inhibitor in flush. NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS

22. Set 8000 psi CBP at ~7774'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

```
Zone
            From
                   To
                         spf
                              # of shots
MESAVERDE 7607
                   7608
                         3
                               3
MESAVERDE 7621
                  7622
                         3
                               3
                         3
MESAVERDE 7662
                  7664
                               6
MESAVERDE 7734
                         3
                  7736
                               6
MESAVERDE 7757
                  7759
                         3
                               6
```

- 23. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 9 on attached listing. Under-displace to ~7607' and trickle 250gal 15%HCL w/ scale inhibitor in flush. NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS
- 24. Set 8000 psi CBP at ~7582'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

```
# of shots
Zone
            From
                   To
                         spf
                  7460
MESAVERDE 7459
                         3
                               3
MESAVERDE 7489
                  7490
                         3
                               3
                  7533
                         3
                               3
MESAVERDE 7532
                         3
MESAVERDE 7538
                  7540
                               6
MESAVERDE 7550
                  7552
                         3
                               6
```

- 25. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 10 on attached listing. Under-displace to ~7459' and trickle 250gal 15% HCL w/ scale inhibitor in flush.
- 26. Set 8000 psi CBP at ~7062'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

```
Zone
            From
                    To
                         spf
                              # of shots
WASATCH
            6825
                   6828
                         3
                                9
                   6972
            6970
                         3
                                6
WASATCH
                         3
                                9
WASATCH
            7029
                   7032
```

27. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 11 on attached listing. Under-displace to ~6825' and trickle 250gal 15% HCL w/ scale inhibitor in flush. NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS

28. Set 8000 psi CBP at ~6794'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

```
Zone
                               # of shots
             From
                    To
                          spf
WASATCH
             6572
                   6574
                          3
                                 6
                          3
             6598
                   6601
                                 9
WASATCH
                                 9
                          3
WASATCH
             6761
                   6764
```

- 29. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 12 on attached listing. Under-displace to ~6572' and trickle 250gal 15% HCL w/ scale inhibitor in flush.
- 30. Set 8000 psi CBP at ~6317'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

```
Zone From To spf # of shots
WASATCH 6242 6246 4 16
WASATCH 6285 6287 4 8
```

- 31. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 13 on attached listing. Under-displace to ~6242' andflush only with recycled water.
- 32. Set 8000 psi CBP at~6317'.

- 33. ND Frac Valves, NU and Test BOPs.
- 34. TIH with 3 7/8" bit, pump open sub, SN and tubing.
- 35. Drill 13 plugs and clean out to a depth of 9600' (~ 20' below bottom perfs). This well WILL NOT be commingled at this time.
- 36. Shift pump open bit sub and land tubing at 9373'. Flow back completion load. RDMO.
- 37. MIRU, POOH tbg and POBS. TIH with POBS.
- 38. Drill last plug @ 9610' clean out to PBTD at 10819'. Shear off bit and land tubing at ±10358'. This well WILL be commingled at this time. NOTE: If the CBP between the initial completion and the recompleted sands has been in the well for more than 30 calendar days from the beginning of flowback for the recompletion, a sundry will need to be filed with the state. Contact the Regulatory group to file the sundry prior to commencing work.
- 39. Clean out well with foam and/or swabbing unit until steady flow has been established from completion.
- 40. Leave surface casing valve open. Monitor and report any flow from surface casing. RDMO

Completion Engineer

Jamie Berghorn: 303/909-3417, 720/929-6230

Production Engineer

Mickey Doherty: 406/491-7294, 435/781-9740

Ronald Trigo: 352/213-6630, 435/781-7037

Brad Laney: 435/781-7031, 435/828-5469

Boone Bajgier: 435/781/7096, 713/416/4816

Heath Pottmeyer: 740/525-3445, 435/781-9789

Anqi Yang: 435/828-6505, 435/781-7015

Completion Supervisor Foreman

Jeff Samuels: 435/828-6515, 435/781-7046

Completion Manager

Jeff Dufresne: 720/929-6281, 303/241-8428

Vernal Main Office

435/789-3342

Emergency Contact Information—Call 911

Vernal Regional Hospital Emergency: 435-789-3342

Police: (435) 789-5835

Fire: 435-789-4222

Acid Pickling and H2S Procedures (If Required)

**PROCEDURE FOR PUMPING ACID DOWN TBG

WHEN FINDING SCALE IN TUBING THAT IS ACID SOLUBLE, ENSURE THAT PLUNGER EQUIPMENT IS REMOVED AND ABLE TO PUMP DOWN TBG. INSTALL A 'T' IN PUMP LINE W/2" VALVE THAT NALCO CAN TIE INTO. HAVE 60 BBLS 2% KCL MIXED W/ 10-15 GAL H2S SCAVENGER IN RIG FLAT TANK. (WE USED THE RIG FLAT TANK FOR MIXING CHEMICAL SO WE DIDN'T HAVE THE CHEMICAL IN ALL FLUIDS ON LOCATION, ONLY WHAT WE NEEDED TO PUMP DOWN HOLE)

- 1. PUMP 5-10 BBLS 2% KCL DOWN TBG (NALCO CANNOT PUMP AGAINST PRESSURE)
- 2. NALCO WILL PUMP 3 DRUMS HCL (31%) INTO PUMP LINE.
- 3. FLUSH BEHIND ACID WITH 10-15 BBL 2% KCL
- 4. PUMP 2—30 BBL 2% W/ H2S SCAVENGER DOWN TBG.
- 5. PUMP REMAINDER OF 2% W/ H2S SCAVENGER DOWN CASING AND SHUT WELL IN FOR MINIMUM OF 2 HRS.
- 6. OVER DISPLACE DOWN TBG AND CSG TO FLUSH ACID AND SCAVENGER INTO FORMATION
- 7. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

** PROCEDURE FOR PUMPING H2S SCAVENGER WITHOUT ACID

PRIOR TO RIG MOVING ON OR AS RIG PULLS ONTO LOCATION. TEST CASING, TUBING AND SEPARATOR FOR H2S. IF FOUND MAKE SURE THAT PLUNGER SYSTEM IS REMOVED (IT IS POSSIBLE TO PUMP AROUND PLUNGERS BUT SOME WILL HAVE A STANDING VALVE IN SEATING NIPPLE).

- 1. MIX 10-15 GAL H2S SCAVENGER WITH 60-100 BBL 2% KCL IN RIG FLAT TANK.
- 2. PUMP 25 BBLS MIXTURE DOWN TUBING AND REST DOWN CASING. SHUT WELL IN FOR 2 HOURS.
- 3. IF WELL HAS PRESSURE AFTER 2 HOURS RETEST CASING AND TUBING FOR H2S.
- 4. FLUSH TUBING AND CASING PUSHING H2S SCAVENGER INTO FORMATION.
- 5. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

** As per APC standard operating procedure, APC foreman will verify ALL volumes pumped and record on APC Volume Report Form

The control of the	NBU 921-35H1BS Slickwater Frac	J	opy to r	Copy to new book	Recomplete? Pad?	> >			Production Log DFIT	0 0	Enter 1 if running a Pro Enter Number of DFITs	Enter 1 if running a Production Log Enter Number of DFITs	Bo					
Perfect Perf					ACTS? Days on Pad?	z m			GR only Low Scale		ter Y if only (ter Y if a LOW	Samma Ray log v / concentration o	vas run f Scale Inhil	oitor will be	pedund			
					Wells on Pad?	4			Clay Stab.		ter N if there	will be NO Clay s	tabilizer					
Total Sept House Sept		erfs		Ra		Initial	Final	Fluid			olume,	Cum Vol	Fluid	Sand		Cum. Sand	Footage from	Scale Inhib.
1 1 1 1 1 1 1 1 1 1	1-		SPF	Holes		bdd	bdd		gals		BBLs	BBLs	% of frac	% of frac	sql	sql	CBP to Flush	gal.
Column C				8	Pre-Pad			Slickwater	6,138	6,138	146	146		Г				ю
See 10 10 10 10 10 10 10				m m	0 ISIP and 5 min ISIP 50 Slickwater Pad			Slickwater	6.345	12.483	151	297	15.0%	0.0%	C	C		m
State Stat				ю	50 Slickwater Ramp	0.25		Slickwater	11,985	24,468	285	583	28.3%	21.9%	5,243	5,243		9
Column C				9 (50 SW Sweep	0 0		Slickwater	0	24,468	0 100	583	ò	0.0%	0	5,243		0
State Stat				٥	50 SW Sweep	0.63		Slickwater	0 0	36,453	0 0	808	20.3%	%4.4% 0.0%	8,240	13,483		٥ ٥
State Stat	ш				50 Slickwater Ramp	0.25		Slickwater	0	36,453	0	898		0.0%	0	13,483		0
Stand barry	ш				50 Slickwater Ramp	0.75		Slickwater	11,985	48,438	285	1,153	28.3%	43.8%	10,487	23,970		9 (
100 100	ш ш				50 Flush (4-1/2) ISDP and 5 min ISDP				6,138	54,577	146	1,299				23,970	-1	37
Start below target Start below vigations Start b	ш																	i
Fluid depth State	шш							Sand laden Vol	g a	42 300								
10 10 10 10 10 10 10 10									2	44,300				gal/ft	009		lbs sand/ft	
State Stat		# of Perf	s/stage		_							Flush depth 9	,403	-O-	BP depth		18	
State Stat			•								•	Í						
Sinch and the control of the contr				9 6	Pump-in			Sickwater		0	0	0						
10 10 10 10 10 10 10 10					Slickwat			Slickwater	6,930	6,930	165	165	15.0%	%0.0	0	0		ო
Substitution Subs					50 Slickwater Ramp	0.25		Slickwater	13,090	20,020	312	477	28.3%	21.9%	5,727	5,727		7
Size 1935 20 Six Sweep 10 10 14 17 15 15 15 15 15 15 15					50 SW Sweep 50 Slickwater Ramp	0 0		Slickwater	13.090	33 110	312	477	28.3%	34.4%	0 000 8	5,727		0 ^
State Stat					50 SW Sweep	0		Slickwater	0	33,110	0	788		0.0%	0	14,726		. 0
Soft Particisage Soft Partic					50 Slickwater Ramp	0.25		Slickwater	0	33,110	0 ; 0	788	ò	%0.0	0 :	14,726		01
Suppose Supp					50 Slickwater Ramp 50 Flush (4-1/2)	0.75		Slickwater	13,090	46,200 52,146	312	1,100	28.3%	43.8%	11,454	26,180		∼ €
## of Peristange 24 Service purp time (min) Sand biden Volume 46,200 Flush depth 9,108 Sand biden Volume 46,200 Sand biden V	ш								9	52,146	!	ļ Ļ						26
## of Peristange 24	шш																	
# of Perryadage 24	ш							Sand laden Vol	nme	46,200							:	
8973 8874 3		# of Perf	s/stage	54								Flush depth 9	,108	a Bal⊯ C	600 BP depth		lbs sand/ft 13	
897 897 3 1				24														
8907 3 50 Silckwater Pad Silckwater Pad 8 955 213 15.0% 0.0%				3	_			Slickwater		0	0	0						
Section Sect					ISIP and			Clickon	2200	200	2	2	45.00	80	c	c		•
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9001 9002 3 50 Silckwater Ramp 0.63 0.75 Silckwater 16,915 42,785 403 1,019 28.3% 34.4% 11,629 19,029 9041 9042 3 50 Silckwater Ramp 0.2 0.75 Silckwater 1 Silckwater 0.42,785 0 1,019 0.0% 0 19,029					50 SW Sweep	0		Slickwater	0	25,870	0	616		%0.0	0			0
9041 9042 3 5 5) SW Sweep 0 0 0 Slickwater Ramp 0.25 0.75 Slickwater Ramp 0.25 0.70 Slickwater Ramp 0.25 0.75 Slickwater 0.25 0.70 Slickwater Ramp 0.25 0.70 Slickwater Ramp 0.25 0.70 Slickwater Ramp 0.25 0.75 Slickwater 0.25 0.70 Slickwater 0.25 0.70 Slickwater Ramp 0.25 0.70 Slickwater Ramp 0.25 0.70 Slickwater 0.25 0.70 Sli					50 Slickwater Ramp	0.63		Slickwater	16,915	42,785	403	1,019	28.3%	34.4%	11,629			80
## of Periyasage 24 ## of Periyasage 25 ## of					50 SW Sweep	0 5		Slickwater	0	42,785	0 (1,019		%0.0	0 (19,029		0
Solution the factor of the fac					50 Slickwater Ramp	0.25		Slickwater	0 10	42,785	0 0	1,019	òc	0.0%	0 ,0	19,029		0 0
# of Perfessing 24	ш ц				50 Slickwater Ramp	0.75		Sickwater	16,915	59,700	403	1,421	28.3%	43.8%	14,801	33,830		œα
Sand laden Volume 59,700 gau/nt 600 340 lbs sand/nt # of Perfesting 24 Flush depth 8,873 CBP depth 8830 43	ш.				ISDP and 5 min ISDP				267,0	65.492	92	600,1				00,000		33
Sand laden Volume	Щ									1								3
# of Perfedage 24 CBP depth 8,873 CBP depth 8,830	ш									1								
24 Flush depth 8,873 CBP depth 8,830	ñ							oalid ladel VO		00/,80				gal/ft	009		lbs sand/ft	
		# of Perf	s/stage	24							1	Flush depth 8	,873	. O	BP depth		8	

	_																										_						_														_
Scale Inhib	gal.		c	י כ	0 0	י ע	0 0	0	י ע	o (*	22	1								2	10	0	10	0	0	10	3	38								က၊	2	o ч	0 0	o c	o LO	3	21				
ootage from	CBP to Flush														340 lbs sand/ft	50															340 lbe cand/ft	12 12										•				340 lbs sand/ft	20
Cum. Sand Footage from	lbs		C		4,686	`		12,049	21.420	21,420	2					8,596				0	8,851	8,851	22,759	22,759	22,759	40,460	40,460				370											21,250					8,159
Sand	lbs		C	7 686) (7 363	, ,	0 0	9.371	5,0					900	CBP depth 8,596				0	8,851	0	13,908	0	0	17,701					003	CBP depth 8,374				0 !	4,648	7 305	, ,	0 0	9.297					009	CBP depth 8,159
Sand	% of frac					34.4%	0.0%	0.0%							gal/ft	ပ					.,	0.0%	34.4%	0.0%	0.0%						#//65	gaint C						34 4%	0.0%	0.0%						gal/ft	ပ <u> </u>
Fluid	% of frac			28.3%		28.3%			28.3%							8,646				15.0%	28.3%		28.3%			28.3%						8,386				15.0%		28.3%			28.3%						8,209
Cum Vol	BBLs	0	105	390	068	645	645	645	006	1 034						Flush depth 8,646		0		255	737	737	1,218	1,218	1,218	1,700	1,830					Flush depth 8,386		0		134	387	387	940	040	893	1,020				i	Flush depth 8,209
Volume	BBLs	0	125	25.0	000	255	000	0 0	255	134	2							0		255	482	0	482	0	0	482	130							0		134	253	0 0	557	o c	253	128					
Cum Vol	gals	0	6.670	3,070	16.380	22,090	27,090	27,090	37,800	43,444	43 444	0		37.800	,			0		10,710	30,940	30,940	51,170	51,170	51,170	71,400	76,874	76,874			71,400			0		5,625	16,250	16,250	26,075	26,875	37,500	42,859	42,859		37,500		
Volume	gals		6.670	0,070	2.0	10 710	2.0	0 0	10.710	5,644	5			nme						10,710	20,230	0	20,230	0	0	20,230	5,474				nme					5,625	10,625	10 625	0,020		10,625	5,359			nme		
Fluid		Slickwater	lichwater	Slickwater	Slickwater	Slickwater	Slickwater	Slickwater	Slickwater					Sand laden Volume				Slickwater		Slickwater	Slickwater	Slickwater	Slickwater	Slickwater	Slickwater	Slickwater				_	Sand laden Volume			Slickwater		Slickwater	Slickwater	Slickwater	Slickwater	Slickwater	Slickwater				Sand laden Volume		
Final	bdd	0,					200	_	_									0,		_				0							-			0,				0 0 0							- 0,		
Initial	bdd						500																0.63	0	0.25	0.75											0.25	0 0	500	0 0 5	0.75						
Fluid	Туре	Pump-in test	Slickwater Dad	Slickwater Ramn	SW Sweep	Slickwater Ramp	50 SW Sweep	Slickwater Ramp	Slickwater Ramp	Flush (4-1/2)	ISDP and 5 min ISDP						<< Above pump time (min)	Pump-in test	ISIP and 5 min ISIP	Slickwater Pad	Slickwater Ramp	SW Sweep	Slickwater Ramp	SW Sweep	Slickwater Ramp	50 Slickwater Ramp	Flush (4-1/2)	ISDP and 5 min ISDP					<< Above pump time (min)	Pump-in test	ISIP and 5 min ISIP	Slickwater Pad	Slickwater Ramp	50 SW Sweep	SW Sween	Slickwater Ramp	Slickwater Ramp		ISDP and 5 min ISDP				
Rate	BPM	Varied	0 6	9 6	200	2 6	200	20.00	50	2 6	8						20.7	Varied	0	50	20	20	20	20	20	20	20						36.6	Varied	0	20	20	2 2	3 6	2 6	50	20					20.4
	Holes	e c	יי כ) r) M) (C)									2			ო	ю	ю	ю	ю	က	က							24			ო	က	n o	<u>о</u> «)								24
	SPF	е	י רי) (f) M) (°.)									/stage		8	က	ю	ю	ю	ю	က	က							/stage		က	က	က	ကျ	n c)								/stage
Perfs	Bot., ft	8646 8647														# of Perfs/stage				8432 8433			8548 8549		8567 8568							 # of Perfs/stage		8209 8210				8315 8317									# of Perfs/stage
	Zone Top, ft.	4 MESAVERDE 86						MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE				5 MESAVERDE 83	MESAVERDE 84	MESAVERDE 84		MESAVERDE 85	MESAVERDE 85			MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE							MESAVERDE 83		MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE		
	Stage																																														

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Scale Inhib	gal.		ď	۸ ۵	. 0	^	· c	o c	^	- cr	26	2								L	o 5	2 ←	э :	10	0	0	10	3	33								(က	9	0	9	0	0	9	2	23					
ge from	CBP to Flush														nd/ft	10																	nd/ft	10															17/100	11011 25	
Foota	CBP		0	2 6		. (. "	. "							340 lbs sand/ft			L		_) c	N (N 1	0	'n	(0	0	0					340 lbs sand/ft	1				0	10	10	_	_	_	0	0				940 lbc mad/#	8	
Cum. Sand Footage from	sql			5 7 2 7	5.727	1472	14726	14726	26.18	26,180					34						0	208,0	8,962	23,046	23,046	23,04	40,97	40,97						1,774				-	5,095	5,095	13,101	13,101	13,10	23,290	23,29				76		
Sand	lbs		C	5 727	0	000 8	,	0 0	11 454	-					900	CBP depth 7.986				0		0,302	0 !	14,083	0	0	17,924						009	CBP depth 7,774			•	0	5,095	0	8,006	0	0	10,189					000	CBP depth 7.582	
Sand	% of frac		0.0%	21.9%	0.0%	34.4%	0.0%	%0.0	43.8%						dal/ft	-ပ ,	-			90	0.0.0	0.6.12	0.0%	34.4%	%0.0	%0.0	43.8%						gal/ft	<u>υ</u> -			0	0.0%	21.9%	%0.0	34.4%	%0.0	0.0%	43.8%					4)/100		
Fluid	% of frac		15.0%	28.3%		28.3%			28.3%							966				45.00	0,0.01	20.370		28.3%			28.3%							,784				15.0%	28.3%		28.3%			28.3%						209	
Cum Vol	BBLs	0	165	477	477	788	788	788	1 100	1 224						Flush depth 7.996		c	•	C	246	140	746	1,234	1,234	1,234	1,721	1,842						Flush depth 7,784		0	!	147	424	424	701	701	701	979	1,097					Flush depth 7.607	
Volume	BBLs	0	165	312	i C	312	2 0	0 0	312	124								c	•	C	700	004	0 !	488	0	0	488	121								0	!	147	277	0	277	0	0	277	118						
Cum Vol	gals	0	6 930	00000	20,020	33 110	33,110	33 110	46.200	51 420	51,120	24.		46 200	1			C	•	10.04	0,040	000,10	31,330	51,815	51,815	51,815	72,300	77,381	77,381			72,300				0		6,165	17,810	17,810	29,455	29,455	29,455	41,100	46,066	46,066			41,100		
Volume	gals		6 930	13,090	0	13.090	200	0 0	13 090	5 220)			0						0.0	0,045	20,400	0 !	20,485	0	0	20,485	5,081				Ф						6,165	11,645	0	11,645	0	0	11,645	4,966				Ф		
														- Nolum	_			L														Nolum.		4														— <u>;</u>	- -		
Fluid		Slickwater	Slickwater	Slickwater	Slickwater	Slickwater	Slickwater	Slickwater	Slickwater					Sand laden Volume				Slickwater		referred	Clichwater	Olichwater	Siickwater	Slickwater	Slickwater	Slickwater	Slickwater					Sand laden Volume				Slickwater		Slickwater	Slickwater	Slickwater	Slickwater	Slickwater	Slickwater	Slickwater				-	Sand laden Volume		
Final	bdd			0.625	0	0.75	2 0	0 75	-	-											100	0.00	0	0.75	0	0.75	-												0.625	0	0.75	0	0.75	-							
Initial	ppg			0.05) c	63	3	0.25	0.75	2								l			100	0.70	o	0.63	0	0.25	0.75							ı					0.25	0	0.63	0	0.25	0.75							
Fluid	Туре	Pump-in test	Slickwater Pad	Slickwater Ramp	SW Sweep	Slickwater Ramp	50 SW Sweep	Slickwater Ramp	Slickwater Ramp	Flush (4-1/2)	ISDP and 5 min ISDP							Pumo-in test	O ISI ond & page OISI O	Olishander Dad	Olickwater Fad	Silchwater Namp	Sw Sweep	50 Slickwater Ramp	SW Sweep	Slickwater Ramp	Slickwater Ramp	Flush (4-1/2)	ISDP and 5 min ISDP							Pump-in test	ISIP and 5 min ISIP	Slickwater Pad	Slickwater Ramp	SW Sweep	Slickwater Ramp	SW Sweep	Slickwater Ramp	50 Slickwater Ramp	Flush (4-1/2)	ISDP and 5 min ISDP					
Rate	BPM	Varied	200	3 6	50	200	20.00	200	200	20.00)						24.5	Variod	2		000	000	20	20	20	20	20	20							36.8	Varied	0 6	20	20	20	20	20	20	20	20						21.9
	Holes	e «	m	o cc	9	9)									24) c	o 0	0 0	n 1	m	m	က								24			n (9	9	9										24	
	SPF	m m	· m) r:	· co	m)									stage	,	er.	· () () c	2 (n 1	m ·	m	က								stage		က	n o	m	m	က										stage	
ïδ	Bot., ft	7997	8079	8104	8128	8138										# of Perfs/stage		7785	7808	1000	7055	1000	1067	7914	7944	2963								# of Perfs/stage		7608	729/	7664	7736	7759										# of Perfs/stage	
Perfs	Top, ft.	7996	8078	8103	8126	8136												7784	7807	7007	7055	7000	0067	7913	7943	7962										7607	1297	7662	7734	7727											
	Zone	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE				MESAVERDE	MESAVEPDE	MICON CINE	MESAVENDE		MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE				9 MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE	MESAVERDE		
	Stage																																			-															

_	_							_			
Scale Inhib.,	gal.	7 50 00 00 00 00 00 00 00 00 00 00 00 00			20400	0 0 0 13			α τα 4 α o o	0 0 13	
Footage from	CBP to Flush		340 lbs sand/ft 397				1,012 lbs sand/ft				1,334 lbs sand/ft 255
Cum. Sand Footage from	lbs	3,942 3,942 10,136 10,136 10,136 18,020			0 6,420 17,206 17,206	17,206			0 6,472 17,344 17,344	17,344	
Sand	lbs	3,942 0 6,194 0 7,884	CBP depth 7,062		0 6,420 10,786		1,209 CBP depth 6,794		0 6,472 10,873		CBP depth 6,317
Sand	% of frac	0.0% 21.9% 0.0% 34.4% 0.0% 43.8%	gal/ft_C		0.0% 37.3% 62.7%		gal/ft		0.0% 37.3% 62.7%		gal/ft
Fluid	% of frac	15.0% 28.3% 28.3% 28.3%	7,459		15.0% 50.0% 35.0%		6,825	П	15.0% 50.0% 35.0%		6,572
Cum Vol	BBLs	0 328 328 328 543 543 777 873	Flush depth 7,459		73 318 489 595	595	Flush depth 6,825	0	74 321 493 595	595	Flush depth 6,572
Volume	BBLs	215 215 0 0 0 215 215 116			73 245 171 106	106		0	74 247 173 102	102	
Cum Vol	gals	4,770 13,780 12,780 22,790 22,790 31,800 36,669	31,800		3,082 13,354 20,545 25,000	25,000	20,545	0	3,106 13,461 20,710 25,000	25,000	20,710
Volume	gals	9,010 9,010 9,010 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	olume		3,082 10,272 7,191 4,455		olume		3,106 10,355 7,248 4,290		alume
Fluid		Slickwater Slickwater Slickwater Slickwater Slickwater Slickwater	Sand laden Volume		Slickwater Slickwater Slickwater Slickwater Slickwater		Sand laden Volume	Slickwater	Slickwater Slickwater Slickwater Slickwater		Sand laden Volume
Final	bdd	0.625 0 0.75 0 0 0.75			- a				- 2		
Initial	bbg	0.25 0 0.63 0 0.25 0.75			0.25			П	0.25		
Fluid	Туре	1 (14) Pump-in test 0 (ISIP and 5 min ISIP 50 Silckwater Pad 50 Silckwater Ramp			lied Pump-in test 0 ISIP and 5 min ISIP 50 Slickwater Pad 50 Slickwater Ramp 50 Slickwater Ramp 50 Flush (4-1/2) ISDP and 5 min ISDP			Pump-in test 0 ISIP and 5 min ISIP	50 Slickwater Pad 50 Slickwater Ramp 50 Slickwater Ramp 50 Flush (4-1/2) ISDP and 5 min ISDP		
Rate	BPM	/ar		17.5	Varied 0 20 50 50 50 50 50 50 50		:	6 Varied	50 50 50		11.9
	Holes	<u> </u>	21		6 V 6		24	9 6	o		75
	SPF	м м м м •	stage		е е е		stage	n n	m		stage
Perfs	Top, ft. Bot., ft	7459 7460 7489 7490 7532 7533 7588 7540 7550 7552	# of Perfs/stage		6625 6828 6970 6972 7029 7032		# of Perfs/stage		6761 6764		# of Perfs/stage
	Zone	MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE	MESAVERDE		11 WASATCH WASATCH WASATCH WASATCH WASATCH WASATCH	WASATCH WASATCH WASATCH WASATCH	WASATCH WASATCH	12 WASATCH WASATCH	WASATCH WASATCH WASATCH WASATCH WASATCH	WASATCH WASATCH WASATCH WASATCH	WASATCH
	Stage							ľ			

stages gals

13 4,075

Perfs			Rate	Fluid	Initial	Final	Fluid	Volume	Cum Vol	Volume	Cum Vol	Fluid	Sand	Sand	Cum. Sand Footage from	Footage from	Scale Inhib.,
Top, ft. Bot., ft	SPF Holes BPM	loles	ВРМ	Туре	bbg	bbg		gals	gals	BBLs	BBLs	% of frac	% of frac	lbs	lbs	CBP to Flush	gal.
6246	4	16 \	Varied	16 Varied Pump-in test			Slickwater		0	0	0						
6287	4	80	0	0 ISIP and 5 min ISIP										_			
			20	50 Slickwater Pad			Slickwater	3,139	3,139		75	15.0%	0.0%	0	0		7
			209	50 Slickwater Ramp	0.25	_	Slickwater	10,463	13,601	249	324	20.0%	37.3%				2
			20	50 Slickwater Ramp	-	7	Slickwater	7,324	20,925		498			10,986			4
			20	50 Flush (4-1/2)			Slickwater	4,075	25,000		595				17,525		0
				ISDP and 5 min ISDP			Slickwater							_			0
														_			0
														_	17,525		0
									25,000	26	595			_			0
																	10
														_			
														_			
							Sand laden Volume	olume	20,925								
													gal/ft	2,616	2,191	lbs sand/ft	
# of Perfs/stage	stage	24									Flush depth 6,242	6,242	_	CBP depth 6,192	6,192	20	
		ĺ	11.9														
		306						Total Fluid	621,928 gals	gals	14,808 bbls	ppls	_	Total Sand	310,121		
									14,808 bbls	ppls				_			
			4.9								32.9 tanks	tanks			Total	Total Scale Inhib. =	309

15

Service Company Supplied Chemicals - Job Totals

Friction Reducer	185	gals @	0.3	GPT
Surfactant	618	gals @	1.0	GPT
Clay Stabilizer	0	gals @	0.0	GPT
15% Hcl	3250	gals @	250	gal/stg
Iron Control for acid	16	gals @	5.0	GPT of acid
Surfactant for acid	7	gals @	2.0	GPT of acid
Corrosion Inhibitor for acid	20	gals @	6.0	GPT of acid

Third Party Supplied Chemicals Job Totals - Include Pumping Charge if Applicable

Scale Inhibitor	309	gals pumped	0.5	GPT (see schedule)
Biocide	185	gals @	0.3	GPT

Sundry Number: 50367 API Well Number: 43047513650000

NBU 921-35H1BS Perforation and CBP Summary

		Perfo	orations					
Stage	Zones	Top, ft	Bottom, ft	SPF	Holes	Frac	ture Covera	ge
1	MESAVERDE	9403	9404	3	3	9402	to	9588.5
	MESAVERDE	9464	9465	3	3			
	MESAVERDE	9500	9501		3			
	MESAVERDE	9528	9529	3	3			
	MESAVERDE	9544	9546	3	6			
	MESAVERDE	9578	9580	3	6			
	MESAVERDE							
	MESAVERDE							
						000 0000		
	# of Perfs/stage				24	CBP DEPTH	9,385	
2	MESAVERDE	9108	9109	3	3	9107	to	9358
	MESAVERDE	9123	9124	3	3			
	MESAVERDE	9153	9154	3	3			
	MESAVERDE	9172	9173	3	3			
	MESAVERDE	9296	9297	3	3			
	MESAVERDE	9304	9305	3	3			
	MESAVERDE	9328	9329	3	3			
	MESAVERDE	9354	9355	3	3			
	MESAVERDE	9334	9333	3	3			
	# of Perfs/stage				24	CBP DEPTH	9,095	
3	MESAVERDE	8873	8874	3	3	8867	to	9088
	MESAVERDE	8906	8907	3	3			
	MESAVERDE	8930	8931	3	3			
	MESAVERDE	8957	8958	3	3			
	MESAVERDE	8972	8973	3	3			
	MESAVERDE	9001	9002	3	3			
	MESAVERDE	9041	9042	3	3			
	MESAVERDE	9081	9082	3	3			
	# of Perfs/stage				24	CBP DEPTH	8,830	
Α	MESAVERDE	8646	8647	3	3	8644	to	8805
7	MESAVERDE	8751	8752	3	3	0044	10	0000
	MESAVERDE	8764	8765	3	3			
	MESAVERDE	8778	8779	3	3			
	MESAVERDE	8788	8789	3	3			
	MESAVERDE	8798	8800	3	6			
		0790	8800	3	0			
	MESAVERDE							
	MESAVERDE							
	# of Perfs/stage	-			21	CBP DEPTH	8,596	
	" or r enerotage				£1	OBI BEI III	0,000	
	MESAVERDE	8386	8387	3	3	8384	to	8572
	MECAVEDDE	0.44=		_	_			
Ü	MESAVERDE	8417	8418	3	3			_
· ·	MESAVERDE	8417	8418 8433	3	3			
J								
J	MESAVERDE	8432	8433	3	3			
J	MESAVERDE MESAVERDE	8432 8475	8433 8476 8514	3 3 3	3 3 3			
J	MESAVERDE MESAVERDE MESAVERDE MESAVERDE	8432 8475 8513 8548	8433 8476 8514 8549	3 3 3 3	3 3 3 3			
Š	MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE	8432 8475 8513 8548 8560	8433 8476 8514 8549 8561	3 3 3 3	3 3 3 3 3			
Š	MESAVERDE MESAVERDE MESAVERDE MESAVERDE	8432 8475 8513 8548	8433 8476 8514 8549	3 3 3 3	3 3 3 3			
	MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE	8432 8475 8513 8548 8560	8433 8476 8514 8549 8561	3 3 3 3	3 3 3 3 3	CBP DEPTH	8,374	
	MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE # of Perfs/stage	8432 8475 8513 8548 8560 8567	8433 8476 8514 8549 8561 8568	3 3 3 3 3 3	3 3 3 3 3 3 3 24		*	
	MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE # of Perfs/stage MESAVERDE	8432 8475 8513 8548 8560 8567	8433 8476 8514 8549 8561 8568	3 3 3 3 3 3	3 3 3 3 3 3 3 24	CBP DEPTH 8208	8,374 to	8350
	MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE # of Perfs/stage MESAVERDE MESAVERDE	8432 8475 8513 8548 8560 8567 8209 8209	8433 8476 8514 8549 8561 8568 8210 8265	3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 24		*	8350
	MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE # of Perfs/stage MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE	8432 8475 8513 8548 8560 8567 8209 8209 8264 8291	8433 8476 8514 8549 8561 8568 8210 8265 8292	3 3 3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 24		*	8350
	MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE # of Perfs/stage MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE	8432 8475 8513 8548 8560 8567 8209 8209 8264 8291 8302	8433 8476 8514 8549 8561 8568 8210 8265 8292 8303	3 3 3 3 3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 24 24 3 3 3 3		*	8350
	MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE # of Perfs/stage MESAVERDE	8432 8475 8513 8548 8560 8567 8209 8264 8291 8302 8315	8433 8476 8514 8549 8561 8568 8210 8265 8292 8303 8317	3 3 3 3 3 3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 3 24 24 3 3 3 3 3 3		*	8350
	MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE # of Perfs/stage MESAVERDE	8432 8475 8513 8548 8560 8567 8209 8209 8264 8291 8302	8433 8476 8514 8549 8561 8568 8210 8265 8292 8303	3 3 3 3 3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 24 24 3 3 3 3		*	8350
	MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE # of Perfs/stage MESAVERDE	8432 8475 8513 8548 8560 8567 8209 8264 8291 8302 8315	8433 8476 8514 8549 8561 8568 8210 8265 8292 8303 8317	3 3 3 3 3 3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 3 24 24 3 3 3 3 3 3		*	8350
	MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE # of Perfs/stage MESAVERDE	8432 8475 8513 8548 8560 8567 8209 8264 8291 8302 8315	8433 8476 8514 8549 8561 8568 8210 8265 8292 8303 8317	3 3 3 3 3 3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 3 24 24 3 3 3 3 3 3		*	8350
	MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE MESAVERDE # of Perfs/stage MESAVERDE	8432 8475 8513 8548 8560 8567 8209 8264 8291 8302 8315	8433 8476 8514 8549 8561 8568 8210 8265 8292 8303 8317	3 3 3 3 3 3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 3 24 24 3 3 3 3 3 3		*	8350

Sundry Number: 50367 API Well Number: 43047513650000

		Per	forations					
Stage	Zones	Top, ft	Bottom, ft	SPF	Holes	Frac	ture Covera	ge
7	MESAVERDE	7996	7997	2	3	7990	to	8141
,	MESAVERDE	8018	8019	3	3	7990	to	0141
	MESAVERDE	8078	8079	3	3			
	MESAVERDE	8103	8104	3	3			
	MESAVERDE	8126	8128	3	6			
	MESAVERDE	8136	8138	3	6			
	MESAVERDE	0.00	0.00					
	MESAVERDE							
	WEG/WENDE							
	# of Perfs/stage				24	CBP DEPTH	7,986	
8	MESAVERDE	7784	7785	3	3	7780	to	7970
	MESAVERDE	7807	7808	3	3			
	MESAVERDE	7821	7822	3	3			
	MESAVERDE	7855	7856	3	3			
	MESAVERDE	7900	7901	3	3			
	MESAVERDE	7913	7914	3	3			
	MESAVERDE	7943	7944	3	3			
	MESAVERDE	7962	7963	3	3			
	# of Perfs/stage				24	CBP DEPTH	7,774	
0	MESAVEDDE	7607	7608	2	3	7603	to	7778
9	MESAVERDE MESAVERDE	7607 7621		3	3	7603	to	1118
	MESAVERDE	7621	7622	3	6			
	MESAVERDE	7662	7664 7736	3	6			
	MESAVERDE MESAVERDE	7734	7736	3	6			
		7757	1159	3	Ö			
	MESAVERDE MESAVERDE	+ +						
	MESAVERDE	-						
	IVIESAVERDE	-						
	# of Perfs/stage				24	CBP DEPTH	7,582	
10	MESAVERDE	7459	7460	3	3	7452	to	7557
	MESAVERDE	7489	7490	3	3			
	MESAVERDE	7532	7533	3	3			
	MESAVERDE	7538	7540	3	6			
	MESAVERDE	7550	7552	3	6			
	MESAVERDE							
	MESAVERDE							
	MESAVERDE							
	# of Perfs/stage				21	CBP DEPTH	7,062	
44	MACATOLI	0005	0000	2	0	0004	4-	7004
11	WASATCH	6825	6828	3	9	6824	to	7034
	WASATCH	6970	6972	3	6 9		-	
	WASATCH	7029	7032	3	9		-	
	WASATCH	-					-	
	WASATCH WASATCH							
	WASATCH							
	WASATCH							
	WAGATOTT							
	# of Perfs/stage	+ +			24	CBP DEPTH	6,794	
	2 2o, 0 kago				2-7	55. DEI 111	-,	
12	WASATCH	6572	6574	3	6	6572	to	6766
	WASATCH	6598	6601	3	9	3072		3.30
	WASATCH	6761	6764	3	9			
	WASATCH	3.01	0.01	J				
	WASATCH							
	WASATCH							
	WASATCH							
	WASATCH							
						<u> </u>		
	# of Perfs/stage				24	CBP DEPTH	6,317	
13	WASATCH	6242	6246	4	16	6242	to	6291
	WASATCH	6285	6287	4	8			
	WASATCH]]			
	WASATCH							
	WASATCH							
	WASATCH							
	WASATCH]]			
	WASATCH							
								·
	# of Perfs/stage				24	CBP DEPTH	6,192	
	# of Perfs/stage				24	CBP DEPTH	6,192	
	# of Perfs/stage				306	CBP DEPTH Total Pay	6,192	848.5

Sundry Number: 50367 API Well Number: 43047513650000

MD	TVD	EW	NS	INC	AZI	MD	TVD	EW	NS	INC	AZI
0.00	0.00	0.00	0.00	0.00	0.00	4700.00	4602.33	-8.96	731.69	0.00	0.00
100.00	100.00	0.00	0.00	0.00	0.00	4800.00	4702.33	-8.96	731.69	0.00	0.00
200.00	200.00	0.00	0.00	0.00	0.00	4900.00	4802.33	-8.96	731.69	0.00	0.00
300.00	300.00	0.00	0.00	0.00	0.00	5000.00	4902.33	-8.96	731.69	0.00	0.00
400.00	399.98	0.87	1.51	2.00	30.00	5100.00	5002.33	-8.96	731.69	0.00	0.00
450.00	449.93	1.96	3.40	3.00	30.00	5200.00	5102.33	-8.96	731.69	0.00	0.00
500.00	499.86	3.27	5.67	3.00	30.00	5300.00	5202.33	-8.96	731.69	0.00	0.00
550.00	549.79	4.58	7.93	3.00	30.00	5400.00	5302.33	-8.96	731.69	0.00	0.00
600.00	599.71	5.83	10.63	3.84	20.80	5500.00	5402.33	-8.96	731.69	0.00	0.00
700.00	699.36	7.97	18.61	5.68	11.06	5600.00	5502.33	-8.96	731.69	0.00	0.00
800.00	798.68	9.62	30.04	7.60	6.14	5700.00	5602.33	-8.96	731.69	0.00	0.00
900.00	897.56	10.79	44.89	9.55	3.21	5800.00	5702.33	-8.96	731.69	0.00	0.00
1000.00	995.87	11.48	63.15	11.52		5900.00	5802.33		731.69	0.00	
1100.00	1093.50	11.68	84.80	13.49	359.90	6000.00	5902.33		731.69	0.00	
1200.00	1190.31	11.40	109.81	15.48	358.87	6100.00	6002.33		731.69	0.00	
1293.78	1280.27	10.69	136.29	17.34	358.11	6200.00	6102.33	-8.96	731.69	0.00	
1300.00	1286.21			17.34		6300.00	6202.33		731.69	0.00	
1400.00	1381.66			17.34		6400.00	6302.33		731.69	0.00	
1500.00	1477.12			17.34		6500.00	6402.33		731.69		
1600.00	1572.57			17.34		6600.00			731.69		
1700.00	1668.03					6700.00	6602.33		731.69		
1800.00	1763.48			17.34		6800.00			731.69		
1900.00	1858.94					6900.00			731.69		
2000.00	1954.39			17.34		7000.00			731.69		
2100.00	2049.85					7100.00			731.69		
2200.00	2145.30			17.34		7200.00			731.69		
2300.00	2240.76					7300.00			731.69		
2400.00	2336.21					7400.00	7302.33		731.69		
2500.00	2431.67			17.34		7500.00	7402.33		731.69		
2600.00	2527.12			17.34		7600.00	7502.33				
									731.69		
2700.00	2622.58			17.34		7700.00	7602.33		731.69		
2800.00	2718.03			17.34		7800.00	7702.33		731.69		
2855.64	2771.14					7900.00	7802.33		731.69	0.00	
2900.00	2813.59	-5.09		16.45		8000.00	7902.33		731.69	0.00	
3000.00	2909.97	-5.97	641.07	14.45		8100.00	8002.33		731.69	0.00	
3100.00	3007.22	-6.74		12.45		8200.00	8102.33		731.69	0.00	
3200.00	3105.22	-7.40		10.45		8300.00	8202.33	-8.96	731.69	0.00	
3300.00									731.69		
3400.00	3303.01			6.45		8500.00			731.69		
3500.00	3402.55			4.45		8600.00			731.69		
3600.00	3502.36			2.45					731.69		
3700.00	3602.33					8800.00			731.69		
3722.67	3625.00					8900.00			731.69		
3800.00	3702.33								731.69		
3900.00	3802.33								731.69		
4000.00	3902.33								731.69		
4100.00	4002.33				0.00				731.69		
4200.00	4102.33			0.00	0.00				731.69	0.00	0.00
4300.00	4202.33	-8.96	731.69	0.00	0.00	9500.00	9402.33	-8.96	731.69	0.00	0.00
4400.00	4302.33	-8.96	731.69	0.00	0.00	9600.00	9502.33	-8.96	731.69	0.00	0.00
4500.00	4402.33	-8.96	731.69	0.00	0.00	9700.00	9602.33	-8.96	731.69	0.00	0.00
4600.00	4502.33	-8.96	731.69	0.00	0.00	9782.67	9685.00	-8.96	731.69	0.00	0.00

Sundry Number: 58902 API Well Number: 43047513650000

	STATE OF UTAH		FORM 9				
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22582				
SUNDF	RY NOTICES AND REPORTS (ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
	oposals to drill new wells, significantly d reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES				
1. TYPE OF WELL Gas Well		8. WELL NAME and NUMBER: NBU 921-35H1BS					
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047513650000				
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18t	h Street, Suite 600, Denver, CO, 80217	PHONE NUMBER: 3779 720 929-	9. FIELD and POOL or WILDCAT: 6 INATURAL BUTTES				
4. LOCATION OF WELL FOOTAGES AT SURFACE:			COUNTY: UINTAH				
2143 FNL 0486 FEL QTR/QTR, SECTION, TOWNSI Qtr/Qtr: SENE Section: 3	HIP, RANGE, MERIDIAN: 35 Township: 09.0S Range: 21.0E Meridia	an: S	STATE: UTAH				
11. CHEC	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA				
TYPE OF SUBMISSION		TYPE OF ACTION					
	ACIDIZE	ALTER CASING	CASING REPAIR				
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME				
, , , , , , , , , , , , , , , , , , ,	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE				
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION				
11/12/2014	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK				
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION				
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON				
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL				
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION				
Report Bate.		/	OTHER: Plug Reset				
	WILDCAT WELL DETERMINATION	▼ OTHER	· · · · · · · · · · · · · · · · · · ·				
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore, LP set a 4-1/2 HAL 10K CBP plug at 9,610' on 6/24/2014 on the NBU 921-35H1BS well. As we were removing the frac valves on this well, it was discovered that the CBP was not holding. Therefore, on 11/12/2014 a new 10K CBP was successfully set at 9,600'. Please see the operations summary report for details. Thank you. Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY December 15, 2014							
NAME (PLEASE PRINT) Kristina Geno	PHONE NUMBE 720 929-6824	R TITLE Regulatory Analyst					
SIGNATURE N/A		DATE 12/15/2014					

Sundry Number: 58902 API Well Number: 43047513650000

	US ROCKIES REGION Operation Summary Report									
Well: NBU 921-35H1BS BLUE Spud Conductor: 8/17/2011 Spud date: 8/31/2011										
Project: UTAH-UI	NTAH		Site: NBU	921-35H	I PAD			Rig name no.:		
Event: RECOMP	L/RESEREVEADI	D	Start date	: 6/20/20	14			End date:		
Active datum: Rk Level)	B @5,124.00usft	(above Mean Sea	a	UWI: SE	E/NE/0/9/	S/21/E/35	5/0/0/26/PM/N/2143	3/E/0/486/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation		
6/24/2014	7:00 - 7:30	0.50		48		Р		HSM, RIGGING DOWN & UP		
	7:30 - 9:30	2.00	SUBSPR	30	A	Р		RIG DWN OFF RED WELL MOVED OVER & RIGGED UP. FTP & FCG 125, CONTROL TBG W/ 15 BBLS, ND WH NU BOPS, RU FLOOR UNLAND TBG, RU SCAN TECH.		
	9:30 - 14:00	4.50	SUBSPR	45	Α	Р		SCAN OUT W/ 326 JTS 23/8 L-80.296 JTS YELLOW, 28 BLUE, 2 JUNK. RD SCANTECH RU CUTTERS.		
	14:00 - 16:30	2.50	SUBSPR	34	I	Р		RUN41/2 GR TO 9660' POOH, RIH SET 41/2 HAL 10K CBP @ 9610' POOH RD WL. SWI SDFN TEST SCG & FV TO 6200 PSI FOR 15 MIN LOST 66 PSI, GOOD TEST 6/25/15		
11/10/2014	8:00 - 10:00	2.00	SUBSPR	47	С	Р		WELL HAD 100 PSI ON WELL, HOOKED UP WELL TO FLOW BACK TANK, ATTEMPT TO BLEED WELL DOWN FLOWED FOR 15 MIN WOULDNT BLEED DOWN,SWIFN		
11/12/2014	8:30 - 10:00	1.50	SUBSPR	34	I	Р		WELL HAD 100 PSI ON WELL RU EL, RIH SET 10K CBP@ 9600' POOH, BLED WELL DOWN, RD WL SWIFN		

12/15/2014 11:08:33AM 1

Sundry Number: 61786 API Well Number: 43047513650000

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MINI		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22582
SUNDR	RY NOTICES AND REPORTS O	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significantly d reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well		8. WELL NAME and NUMBER: NBU 921-35H1BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	VSHORE, L.P.		9. API NUMBER: 43047513650000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	h Street, Suite 600, Denver, CO, 80217	PHONE NUMBER: 3779 720 929-0	9. FIELD and POOL or WILDCAT:
4. LOCATION OF WELL FOOTAGES AT SURFACE:			COUNTY: UINTAH
2143 FNL 0486 FEL QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SENE Section: 3	HIP, RANGE, MERIDIAN: 15 Township: 09.0S Range: 21.0E Meridia	n: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE	E NATURE OF NOTICE, REPOR	
TYPE OF SUBMISSION		TYPE OF ACTION	
_		ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
3/25/2015	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	✓ PLUG BACK
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Date:		OTUED.	OTHER:
	WILDCAT WELL DETERMINATION	OTHER	OTHER.
An NOI was approformation on the Normation on the Normation on the Normation on the Normation of the Normati	COMPLETED OPERATIONS. Clearly show all roved on 4/24/2014 to recomply NBU 921-35H1BS well, but du Gas Onshore LP respectfully recknawk formation with a CIBP m an MIT and leave the well sees see the attached procedur. Thank you.	plete the Meseverde ue to poor economics requests to isolate and the CIBP with shut-in for a future e for further details.	Approved by the UManchivisjc2045 Oil, Gas and Mining Date: By:
NAME (PLEASE PRINT) Kristina Geno	PHONE NUMBE 720 929-6824	R TITLE Regulatory Analyst	
SIGNATURE N/A		DATE 3/24/2015	

Sundry Number: 61786 API Well Number: 43047513650000

NBU 921-35H1BS (NBU 921-35H Pad)

W.O.#

Plug back Blackhawk perfs, MIT, then Shut-in for Future Recomplete

NW NE SE NE Sec 35 T9S R21E

LAT: 39.993867 **LONG:** -109.511210 **COORDINATE:** NAD83 (Surface Location)

Uintah County, UT

ELEVATIONS: 5,098' GL 5,124' KB *Frac Registry TVD: 10,785*'

TOTAL DEPTH: 10,880' **PBTD:** 10,819'

SURFACE CASING: 8 5/8", 28# J-55 LTC @ 2,734'

PRODUCTION CASING: 4 1/2", 11.6#, P-110 DQX @ 5,241' 4 1/2", 11.6#, P-110 LTC @ 10,864'

Marker Joint 5,227-5,248 & 7,530-7,551 & 10,260-10,280'

PRODUCTION TUBING: There is no tubing in the hole

TUBULAR PROPERTIES:

Tebebille I lies Elittes.					
	BURST	COLLAPSE	DRIFT DIA.	CAPACIT	TIES
	(psi)	(psi)	(in.)	(bbl./ft)	(gal/ft)
2 3/8" 4.7# L-80 tbg	11,200	11,780	1.901"	0.00387	0.1624
4 ½" 11.6# P-110	10691	7560	3.875"	0.0155	0.6528
2 3/8" by 4 ½" Annulus				0.0101	0.4227

TOPS: BOTTOMS:

1,579' Green River Top

1,787' Bird's Nest Top

2,370' Mahogany Top

4,871' Wasatch Top 7,557' Wasatch Bottom

7,557' Mesaverde Top 10,880' Mesaverde Bottom (TD)

*Based on latest geological interpretation

T.O.C. @ 2292'

RECEIVED: Mar. 24, 2015

^{**}Based on latest interpretation of CBL

Sundry Number: 61786 API Well Number: 43047513650000

Existing Perforations:

Formation	Zone	Top	Btm	spf	Shots	Date	Reason
MESAVERDE	BLACKHAWK	10354	10356	4	8		PRODUCTION
MESAVERDE	BLACKHAWK	10368	10372	4	16		PRODUCTION
MESAVERDE	BLACKHAWK	10397	10398	3	3		PRODUCTION
MESAVERDE	BLACKHAWK	10407	10410	3	9		PRODUCTION
MESAVERDE	BLACKHAWK	10416	10418	3	6		PRODUCTION
MESAVERDE	BLACKHAWK	10444	10446	3	6		PRODUCTION
MESAVERDE	BLACKHAWK	10514	10518	4	16		PRODUCTION
MESAVERDE	BLACKHAWK	10734	10736	4	8		PRODUCTION

CONTACT INFORMATION:

IOC		435-781-9751
FOREMAN	Jason Hackford	435-790-6793
MECHANICAL LEAD	Jim Houghton	435-790-6903
OPERATOR	Derrick Wiseman	435-828-7529
OPERATOR	Rhett Whitmire	435-823-4482
ENGINEER	Robert Miller	435-828-6510

Relevant History:

03/16/2012: Originally completed in Blackhawk formation (3 stages) with \sim 326734 gallons of

Slickwater, 180508 lbs of 30/50 TLC. C/O to 10819'. Land tubing @ 10357'.

06/24/2014: Scanned tubing out of hole and laid down. Ran a gauge ring and then a CBP to

9610'. Tested casing to 6200psi for 15 minutes, lost 66 psi during test. Left well

T&A for recomplete.

Nov 2014: Attempted to remove frac valve, but there was pressure on well. RIH and set

another CBP @ 9600' and removed frac valve.

<u>PROCEDURE</u>: (note: there is no tubing in the well, so you will have to get a work string to cap CBP with cement).

- 1. MIRU. RIH w/ gauge ring to $\pm 10{,}350$ '. RIH w/ a CIBP and set @ 10315'. ND WH, NU BOP's and test.
- 2. Pick up 2 3/8" workstring and tag CIBP just run. Perform a MIT on the casing to 1000 psi (have charted to send information to the agencies and bring results to Robert Miller). Cap CIBP with 105' of class "G" cement (8 sxs/9.2 ft3/1.6 bbls). POOH with tubing and lay down.
- 3. Well to remain shut in until a future recomplete.
- 4. NDBOPE and NUWH.
- 5. Notify CDC, foreman, & operators of RDMOL

Sundry Number: 64343 API Well Number: 43047513650000

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22582
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly reenter plugged wells, or to drill horiz n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-35H1BS		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047513650000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 802	PHONE NUMBER: 17 3779 720 929-	9. FIELD and POOL or WILDCAT: 6 INATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2143 FNL 0486 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 5 Township: 09.0S Range: 21.0E Meri	dian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPO	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
7,pp. Oximute date notice and control	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
6/17/2015	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
 	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	✓ TEMPORARY ABANDON
			WATER DISPOSAL
☐ DRILLING REPORT	L TUBING REPAIR		
Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
Kerr-McGee Oil & Coperations on the N	COMPLETED OPERATIONS. Clearly show Gas Onshore, LP concluded IBU 921-35H1BS well on 6/ations summary report for c	temporary abandonment 17/2015. Please see the	
NAME (DI FACE POINT)	BUONE STATE	DED TITLE	
NAME (PLEASE PRINT) Jennifer Thomas	PHONE NUM 720 929-6808	BER TITLE Regulatory Specialist	
SIGNATURE N/A		DATE 6/29/2015	

				U	IS ROCI	KIES RE	EGION	
				Opera	ation S	umma	ry Report	
Well: NBU 921-3	35H1BS BLUE		Spud Cor	nductor: 8	8/17/2011		Spud date: 8/3	31/2011
Project: UTAH-L	JINTAH		Site: NBL	J 921-35H	H PAD			Rig name no.: GWS 1/1
Event: ABANDO	NMENT		Start date	: 6/15/20	15			End date: 6/17/2015
Active datum: RI	KB @5,124.00usft (a	bove Mean Se	ea	UWI: SE	E/NE/0/9/	S/21/E/35	/0/0/26/PM/N/21	43/E/0/486/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
6/15/2015	6:45 - 7:00	0.25	ABANDT	48		Р		HSM.
	7:00 - 8:30	1.50	ABANDT	30	Α	Р		RU RIG. SICP = 200 PSI. BLOW WELL DOWN. ND WH, NU BOP. RU RIG FLOOR & TBG EQUIP.
	8:30 - 17:00	8.50	ABANDT	31	I	Р		PREP & TALLY 23/8 P-110 TBG. PU 33/4 BIT, BIT SUB & DART VALVE. PU TBG OFF TBG FLOAT. RIH W/ 302 JTS T/ 9576'. RU DRL EQUIP. SWIFN.
6/16/2015	6:45 - 7:00	0.25	ABANDT	48		Р		HSM.
	7:00 - 8:30 8:30 - 11:30	3.00	ABANDT	44 31	С	P P		OPEN WELL 0 PSI. BRK CONV CIRC. DRL OUT CBP'S @ 9600' & 9610'. 0 PSI INCR. WELL WENT ON VACUUM. RD DRL EQUIP. PUSH CBP'S T/ PERFS. XO TBG EQUIP. POOH LD 6 JTS. STD BCK 324 JTS.
	11:30 - 12:30	1.00	ABANDT	34	i	Р		MIRU CUTTERS WL.
	12.00	1.00	7.67.110	01	·	·		PU 4.5 CIBP. RIH SET CIBP @ 10,290'. POOH. RDMO CUTTERS WL.
	12:30 - 15:00	2.50	ABANDT	31	I	Р		PU 23/8 NC. RIH W/ 324 JTS TBG. TAG CIBP @ 10,290'. LD 1 JT.
	15:00 - 17:00	2.00	ABANDT	52	Е	Р		MIRU CAMERON TEST TRUCK. PSI TEST CSG T/ 1000 PSI. (MIT TEST) HELD FOR 30 MIN. GAIN 4 PSI. BLEED PSI OFF. SWIFN. RDMO CAMERON TEST TRUCK.
6/17/2015	6:45 - 7:00	0.25	ABANDT	48		Р		HSM.
	7:00 - 9:30	2.50	ABANDT	51	С	Р		OPEN WELL 0 PSI. MIRU PRO PETRO CMT CREW. BRK CONV CIRC. PUMP 5 BBLS FRESH, 8 SX CLASS G CMT, 2 BBLS FRESH, DISP W/ 34.8. TOC @ 10,190'. POOH LD 6 JTS. REV W/ PKR FLUID. RDMO PRO PETRO.
	9:30 - 15:00	5.50	ABANDT	31	Ī	Р		POOH LD 319 JTS 23/8 P-110 TBG & NC.
	15:00 - 17:00	2.00	ABANDT	47	Α	Р		RD RIG MOVE OVER T/ 3rd OF 4 T&A'S.

6/29/2015 5:00:56PM 1

Sundry Number: 72299 API Well Number: 43047513650000

	STATE OF UTAH		FORM 9				
ſ	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	3	5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22582				
SUNDR	Y NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
current bottom-hole depth, i	Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.						
1. TYPE OF WELL Gas Well		8. WELL NAME and NUMBER: NBU 921-35H1BS					
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON		9. API NUMBER: 43047513650000					
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	PHC n Street, Suite 600, Denver, CO, 80217 377	ONE NUMBER: 720 929-6	9. FIELD and POOL or WILDCAT: 415.6TUERAL BUTTES				
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2143 FNL 0486 FEL			COUNTY: UINTAH				
QTR/QTR, SECTION, TOWNSH	IIP, RANGE, MERIDIAN: 5 Township: 09.0S Range: 21.0E Meridian: \$	S	STATE: UTAH				
11. CHECI	K APPROPRIATE BOXES TO INDICATE N	ATURE OF NOTICE, REPOR	T, OR OTHER DATA				
TYPE OF SUBMISSION		TYPE OF ACTION					
	ACIDIZE	ALTER CASING	CASING REPAIR				
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME				
Approximate date work will start.	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE				
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION				
6/6/2016	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK				
		RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION				
SPUD REPORT Date of Spud:		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON				
DRILLING REPORT		VENT OR FLARE	WATER DISPOSAL				
Report Date:	WATER SHUTOFF ✓ :	SI TA STATUS EXTENSION	APD EXTENSION				
	WILDCAT WELL DETERMINATION	OTHER	OTHER:				
Kerr-McGee O 921-35H1BS well abandoned on 6 recompletion activit of one-year from	completed operations. Clearly show all period if & Gas Onshore, LP requests to temporarily abandoned. The work of the first to be recompleted. We shall show that the first well and therefore requested the date of the MIT. Please sees well on 6/6/2016 showing well by you.	o keep the NBU ell was temporarily Ve are deferring juest a TA extension the attached MIT	epths, volumes, etc. Approved by the UlarheDi5js201@f Oil, Gas and Mining Date: By:				
NAME (PLEASE PRINT) Candice Barber	PHONE NUMBER 435 781-9749	TITLE HSE Representative					
SIGNATURE		DATE					
N/A		6/8/2016					

Sundry Number: 72299 API Well Number: 43047513650000

Keer McGee			
921-35h1bs	Cameron by Austin Ortega		
	Chassis	Left Scale	Right Scale
Serial Number	259925	258749	478035
Datatype		Lower	Upper
Units		PSI G	°F
Unito		10.0	

